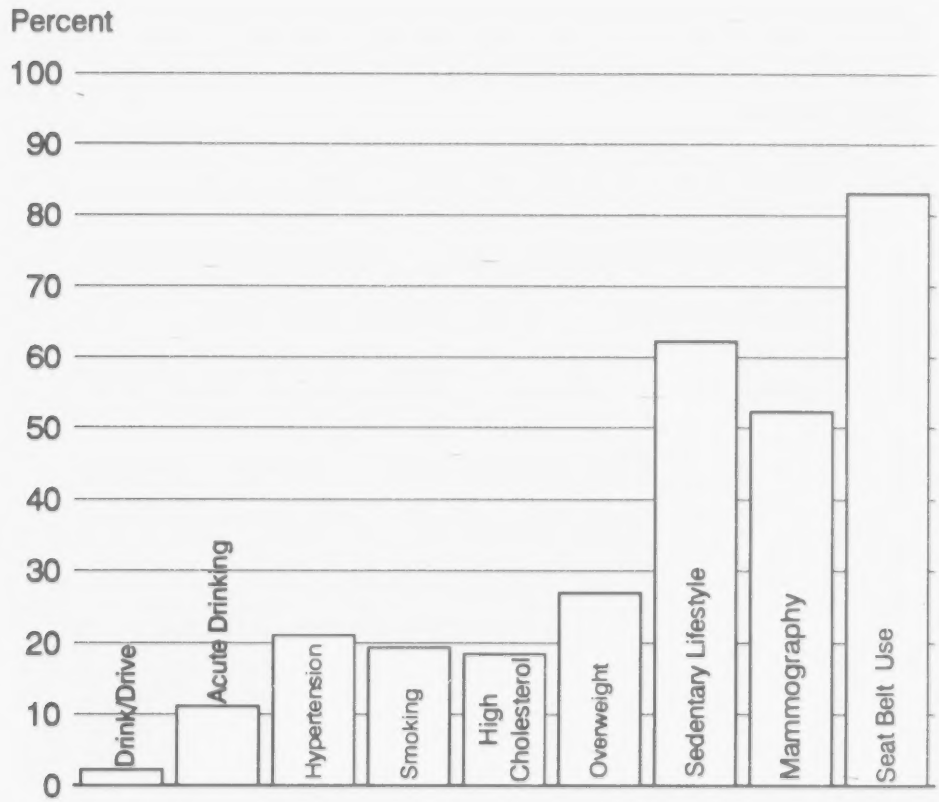
REPORT ON THE HEALTH BEHAVIORS OF IOWANS 1992



IOWA DEPARTMENT OF PUBLIC HEALTH

DIVISION OF SUBSTANCE ABUSE AND HEALTH PROMOTION

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IOWA

HEALTH RISK BEHAVIORS

1992

FINAL REPORT

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INTRODUCTION

Morbidity and mortality data have been recorded by health departments for quite some time. But there had not been an ongoing attempt to monitor those behaviors that are associated with premature death and disability. In 1981, the then Centers for Disease Control (CDC) began assisting states in conducting risk factor surveys. A point in time survey was done in Iowa in 1982. In 1988 Iowa began full participation in CDC's Behavioral Risk Factor Surveillance System. The Iowa Behavioral Risk Factor Surveillance System (BRFSS) is an ongoing telephone survey which is financially and technically supported by the Centers for Disease Control and Prevention (CDC). The BRFSS is designed to collect information on health risk behaviors of residents over the age of 18 and to monitor the prevalence of these behaviors over time. The risk factors surveyed are major contributors to illness, disability, and premature death.

This report focuses on the data collected during calendar year 1992 while also showing four year trends for some risk factors. The risk factors discussed are seat belt use, hypertension, physical activity, weight, tobacco use, alcohol use, diabetes, health insurance coverage, and preventive health practices such as screening for blood cholesterol, cervical and breast cancer and HIV awareness.

Approximately 150 telephone interviews were conducted each month from January through December 1992 for a total sample size of 1728. The interviews were conducted by individuals at Iowa Agricultural Statistics, an office of the National Agricultural Statistical Service under the USDA, under contract with the Division of Substance Abuse and Health Promotion, Iowa Department of Public Health. Telephone numbers were randomly generated by the CDC.

All of the data have been weighted to Iowa's population data for age, gender, income, employment and education, thus providing estimates of the risk factor prevalence among Iowa adults. The state's population estimates were derived from the most currently available census data files (1990).

The BRFSS information is used to design, implement and support health education activities to reduce premature death and disability of Iowa residents. Comparable

factor prevalence. All states use a core questionnaire developed at CDC containing questions that are asked annually and questions that are asked on a rotating (usually every other year) basis. Many states also added questions of their own to provide more detailed information on issues of special interest. Standard telephone survey procedures are employed, and interviews are conducted weekends and evenings. The interviews are conducted throughout the calendar year to assure that data are seasonally adjusted.

GOAL AND OBJECTIVES OF THE BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM

State public health departments are responsible for planning, implementing and evaluating disease prevention programs. Many of these programs deal with health risk behavior modification. Some examples of health risk behavior modification programs in Iowa are seat belt legislation, Clean Indoor Air Act, healthy baby campaigns and drinking and driving campaigns. In order for these programs to be effective, the prevalence of risk factors in the population needs to be assessed and monitored. The Centers for Disease Control and Prevention (CDC) developed the Behavioral Risk Factor Surveillance System (BRFSS) to help states assess health risks and monitor trends.

Goal

To provide data to initiate and guide health promotion and disease prevention programs.

Objectives

1. To determine state specific prevalence of personal health behaviors related to the leading causes of premature death.
2. To develop the capacity of state health departments to conduct credible telephone surveys.
3. To advance the understanding that health-related behaviors are critical indices of health.

METHODOLOGY

Questionnaire Design

The BRFSS questionnaire is analyzed and updated each year by CDC and BRFSS representatives from each participating state. Discussion of previously telephone-tested questions and current BRFSS questions occurs at the annual BRFSS conference.

The questionnaire consists of three sections: 1) the core questions required of all states participating in BRFSS, 2) a set of standardized modules developed by CDC which states may opt to include in their survey, and 3) optional state questions which are designed and administered by individual states to address locally identified health problems.

In addition to the series of health behavior questions, participants are requested to provide demographic information such as age, sex, race, marital and employment status, household income and educational level. Participation is random, anonymous, voluntary and confidential.

Sampling Process

Households are selected randomly using the modified Waksberg, a three-stage cluster sampling technique. The sampling methodology is designed to produce a random sample of Iowa telephone numbers, including unlisted and new subscribers. This method generates telephone numbers by using the first eight digits (area code, prefix, first two suffix numbers) of the ten-digit telephone numbers. From that number a "cluster" of 100 numbers are further generated using the last two telephone suffix digits. These clusters are then screened by calling only the first telephone number generated in the cluster. If the number is residential, the entire cluster of 100 numbers is accepted. Business and non-working numbers are rejected. When the first number in a cluster is residential there is a high probability the cluster will contain a majority of residential numbers. This screening mechanism improves survey efficiency by 10 to 20 percentage points.

Once a cluster is screened and accepted, the 100 randomly ordered phone numbers are called until three interviews are completed within each cluster for a total of 150 interviews per month. Interviewers make multiple attempts to reach a number to complete an interview before replacing that number.

A kish table is used to randomly select one person, 18 years or older, residing in the home. If the person selected is not available, an appointment is made to complete the interview at another date and time. If the person is not available during the interview period, or if they refuse to participate, no other member of that household is interviewed. Then the next randomly ordered telephone number from the same cluster is attempted. If three interviews are not attained, interviews from that cluster are destroyed and a new cluster is substituted.

Interview Process

The IDPH has an interagency contract with Iowa Agricultural Statistics to conduct the interviews. The interviews are conducted evenings and weekends with appointments made as needed to schedule or complete interviews during the daytime hours. The phone calls start the second Wednesday of the month and continue for seven days or until the necessary 150 interviews are completed. The average time to complete an interview in 1992 is twelve minutes.

Using the paper and pencil method, interviewers read from the questionnaire and manually record responses on the questionnaire. The results are coded and entered into the computer. The monthly data diskettes are submitted to CDC for editing. The data are then weighted to account for the 1990 age, race, sex, income and educational level distribution of Iowans.

Advantages and Limitations

Telephone interviews provide a means to conduct affordable surveys to monitor the prevalence of behavioral risk factors. Surveys based on telephone interviews are much faster to complete than surveys based on in-person interviews. In one hour, an experienced telephone interviewer can handle busy numbers, calls not answered, and refusals to participate, and still successfully complete one and one-half interviews. In contrast, in one day of in-person interviewing, many miles of travel might be required, and few interviews may be completed.

Telephone interviews are less expensive to conduct than in-person interviews. In 1991, almost 92,000 BRFSS interviews were completed nation wide at an average cost of about $50 each. In contrast, an in-person interview costs at least twice as much.

Supervision and administration are simpler for telephone interviews than for in-person interviews. All calls can be made from one central location, and supervisors can monitor interviewers for quality control.

One main limitation, however, applies to telephone surveys. Because only about 93 percent of all U.S. households have telephones, about 7 percent of the population cannot be reached. Persons of low socioeconomic status are less likely than persons of higher socioeconomic status to own telephones and are therefore undersampled. Also, the percentage of households with a telephone varies by region. However, prevalence estimates from the BRFSS correspond well with findings from surveys based on in-person interviews, including studies conducted by the National Center for Health Statistics and the American Heart Association.

Some inaccuracy is expected from any survey based on self-reported information. For example, respondents are known to underreport their weight and inaccurately recall dietary habits. The potential for bias must always be kept in mind when interpreting self-reported data.

Finally, breaking down the data into age, sex, income and educational level categories decreases the sample size of the individual strata and decreases the statistical power to determine statistically significant differences. Some data may not be reported as statistically significant due to small sample sizes. In data analysis, a general rule to remember is that estimates based upon denominators less than 50 are statistically unreliable. Further, denominators less than 500 should be reported as whole percents.

In addition, some people refuse to answer select questions but choose to complete the majority of the questions. Those interviews will still be used in the final count for the total sample size; however, they will not be counted on the specific questions they refused.

EXERCISE

Background

Studies show that the incidence of coronary heart disease (CHD) is approximately twice as high among sedentary men than among those who regularly participate in vigorous physical activity during either leisure time or occupational time [1-5]. This relative risk is only slightly less than the relative risk of smoking, high blood pressure and high blood cholesterol[6]. There are more people at risk for CHD due to inactivity than for any other single risk factor[6]. Thus, it may be the risk factor exerting the greatest impact on public health and coronary heart disease.

Relatively small increases in physical activity are associated with measurable health benefits. It is estimated that only 10% of the adult population exercise the large muscle groups for 20 minutes or longer, 3 or more days per week at their target heart rate. Less than half of the adult population exercise 20 minutes or longer, 3 or more days per week regardless of the intensity[6].

Evidence also suggests that physical activity may positively affect weight control, has antidepressant effects and may reduce temporary anxiety[7,8]. The prevalence of physical inactivity increases as we grow older, especially during adolescence and early adulthood[6].

Strategies to improve the physical activity of Americans include (1) expanded surveillance of activity patterns, (2) greater knowledge of availability and use of physical activity programs, (3) further research to define the relationship of increased activity and chronic disease and (4) provide appropriate physical activity to all school age children as they develop the behaviors for their lifetime.

Exercise in Iowa

In 1992, 62.2% of Iowans reported to be sedentary, defined as no activity or a physical activity or pair of activities that were done for 20 minutes or less, fewer than three times per week. The prevalence of sedentary lifestyle was higher for males (63.3%), than females (61.2%). Regular physical activity was reported by 24.3% of Iowans. Of the males, 24.1% reported regular physical activity and of the females 24.5% reported regular physical activity.

Over half (54.0%) of adults who said they exercise reported walking as their primary activity. The next most prevalent activity reported was a classification of "all other activities" at 23.3%. From that it drops to 5.5% reported running, 4.2% reported yard work, 3.7% reported aerobics class, 3.7% reported bicycling, 2.2% reported calisthenics, 1.7% reported jogging, 0.7% reported swimming, 0.7% reported tennis and 0.4% reported home exercise.

Comparison With Other States

In 1992, Iowa ranked 11th out of the 49 states participating in the BRFSS for prevalence of a sedentary lifestyle or irregular physical activity. The median was 56.52%, while Iowa reported 62.16% of the adult population as sedentary (less than 20 minutes of exercise, three times a week during each month).

Year 2000 Health Objectives for the Nation

The Year 2000 Health Objectives state that the proportion of people age six and older who participated in moderate physical activities three or more days per week for 20 or more minutes per occasion be increased to at least 60%. Although the age groups are not directly comparable, it is clear that Iowans are not meeting the Year 2000 Health Objective. According to BRFSS, 24.3% of Iowa's adults 18 and older are participating in regular physical activity.

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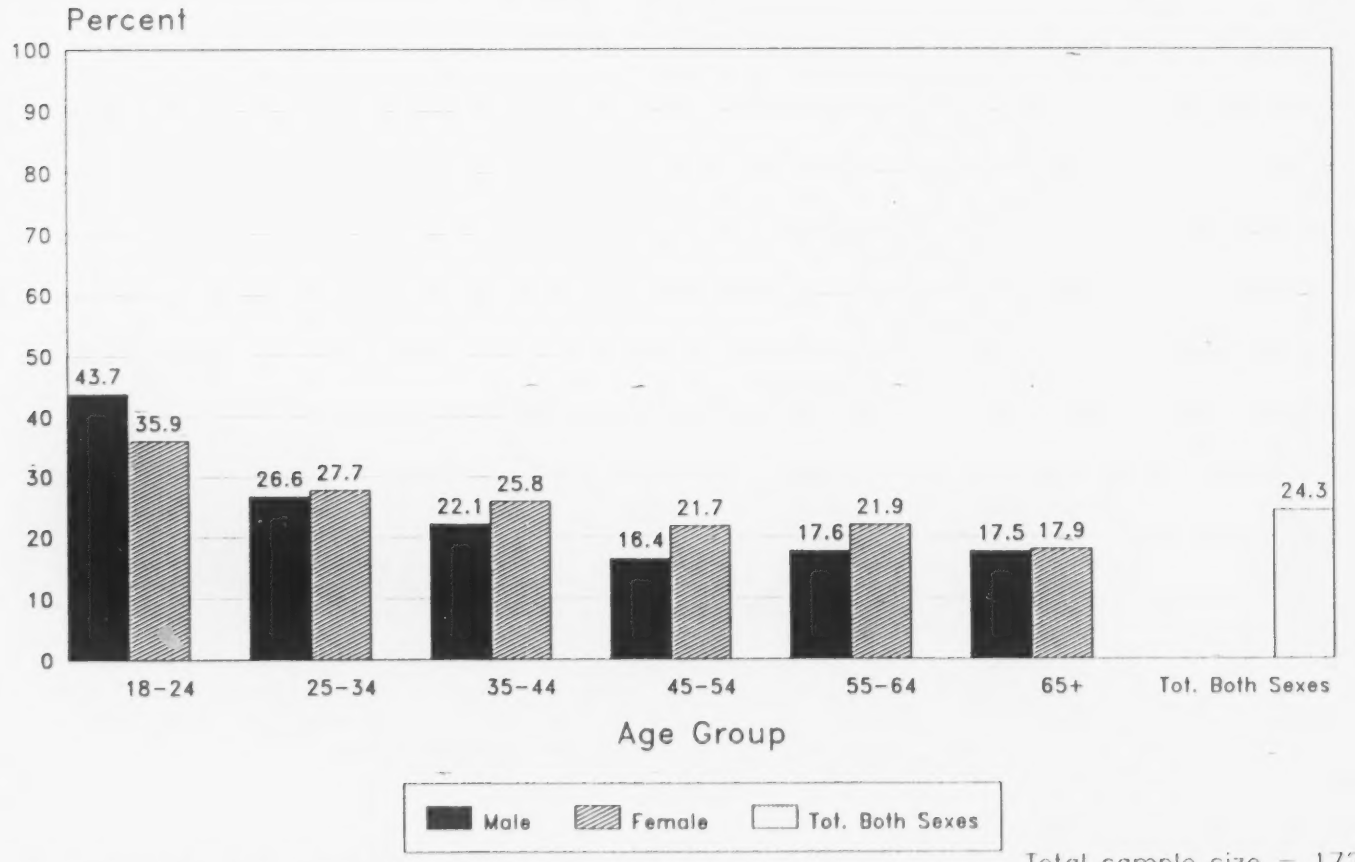
Population Practicing Sedentary and Regular Physical Activity* by Age and Sex, Iowa, 1992

Sex	Age Group	Total Sample Size N	Sedentary n	Sedentary %	Regular* n	Regular* %
Male	18-24	86	46	48.2	34	43.7
	25-34	159	104	66.9	45	26.6
	35-44	186	125	68.3	43	22.1
	45-54	97	66	67.0	16	16.4
	55-64	95	63	65.0	16	17.6
	65+	130	82	61.2	20	17.5
	Unknown/ Refused	1	1	100.0	0	0
	Total	754	487	63.3	174	24.1
Female	18-24	89	51	55.5	30	35.9
	25-34	181	104	58.1	50	27.7
	35-44	199	111	58.5	53	25.8
	45-54	117	68	58.4	26	21.7
	55-64	103	65	64.1	23	21.9
	65+	277	192	68.3	48	17.9
	Unknown/ Refused	8	7	84.6	0	0.0
	Total	974	598	61.2	230	24.5
Total (both sexes)	18-24	175	97	51.9	64	39.9
	25-34	340	208	35.4	95	27.1
	35-44	385	236	63.3	96	53.0
	45-54	214	134	62.8	42	19.0
	55-64	198	128	64.5	39	19.9
	65+	407	274	65.4	68	17.7
	Unknown/ Refused	9	8	85.9	0	0.0
	Total	1728	1085	62.2	404	24.3

*Regular Physical Activity - Respondents who report a physical activity or pair of activities that were done for 20 minutes or more, three or more times a week.

Data collected from the 1992 Behavioral Risk Factor Surveillance System, Bureau of Health Promotion, Iowa Department of Public Health.

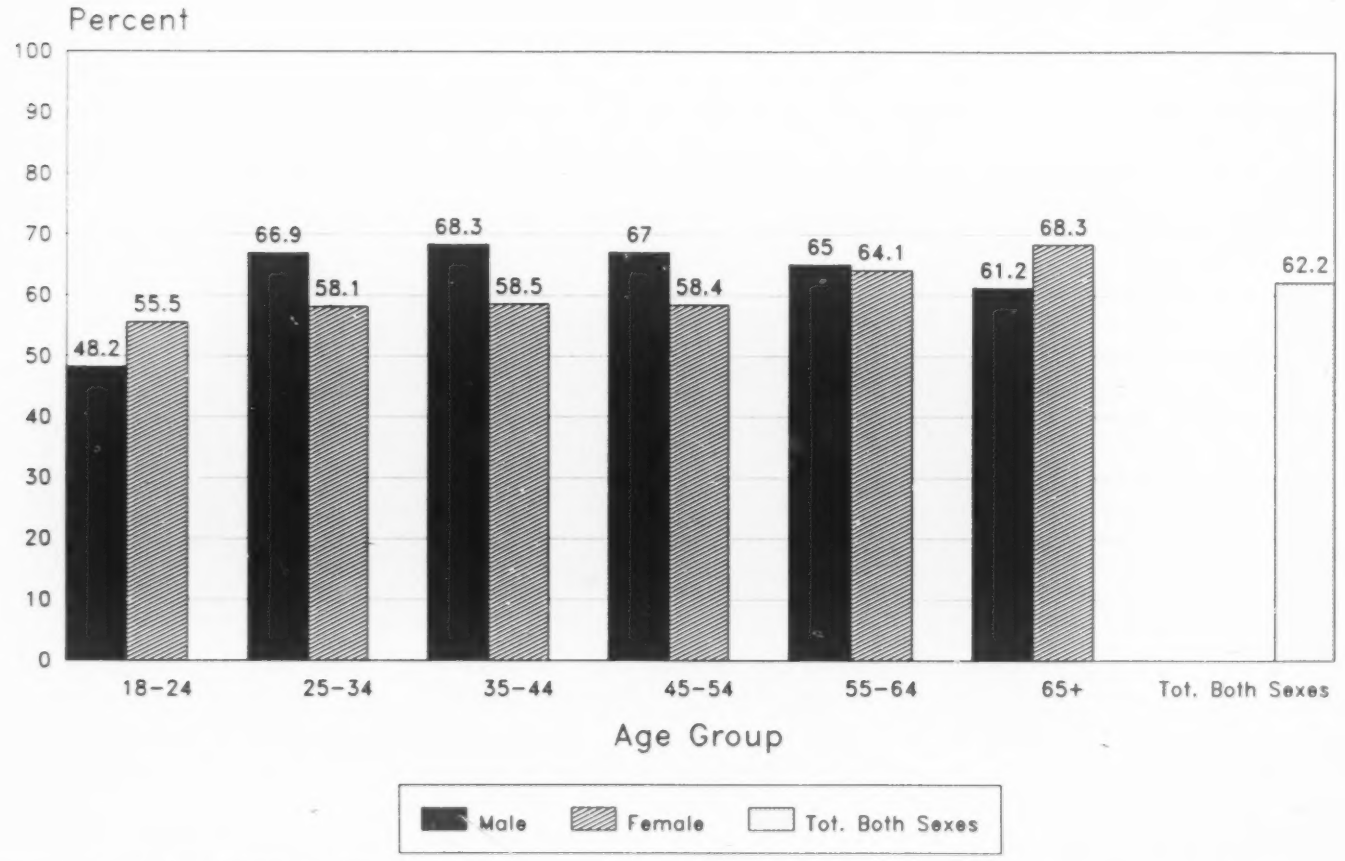
POPULATION PRACTICING REGULAR PHYSICAL ACTIVITY BY AGE AND SEX, IOWA, 1992



Source: 1992 Behavioral Risk Factor Surveillance System, IDPH

Total sample size = 1728
Number of exercisers = 404

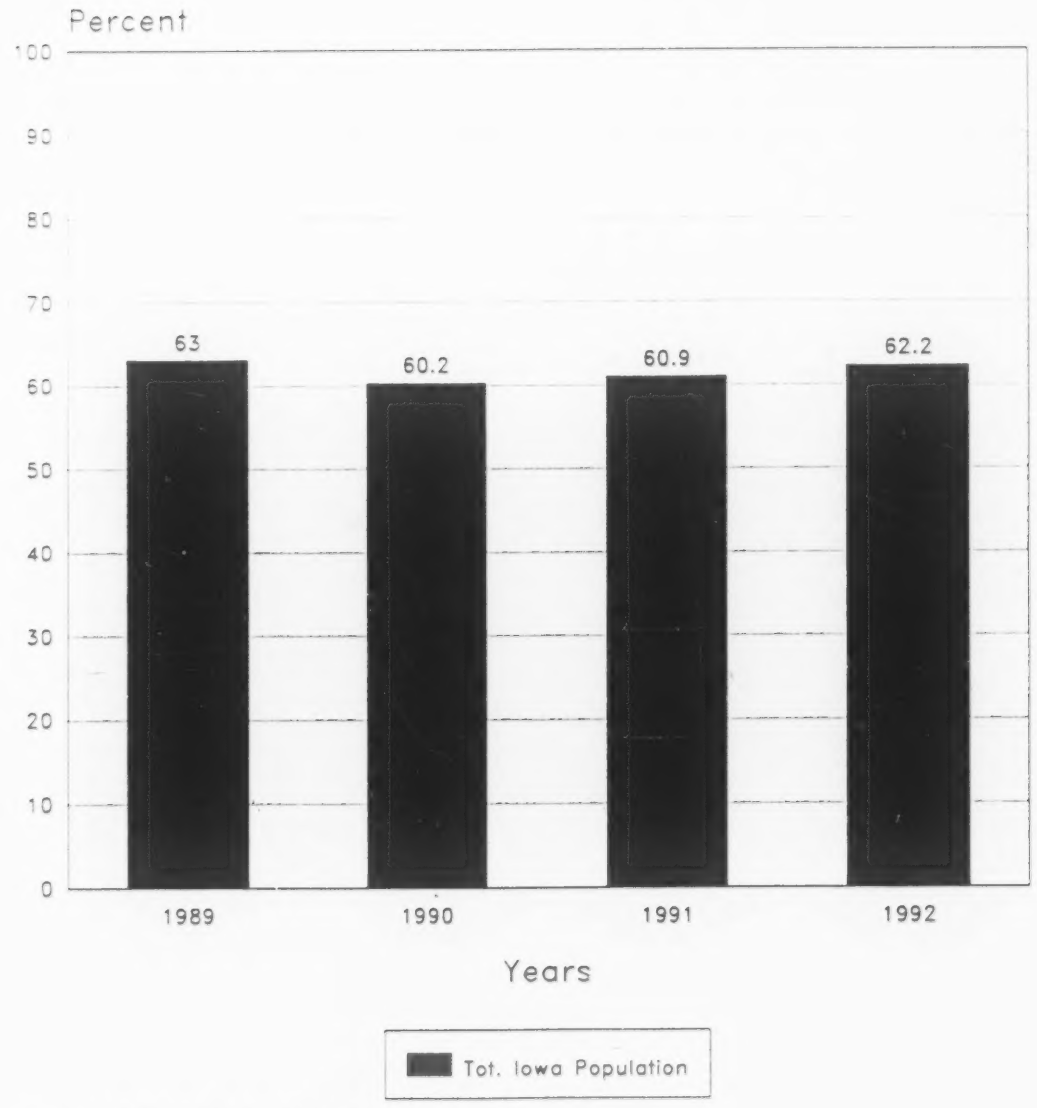
POPULATION PRACTICING A SEDENTARY LIFESTYLE BY AGE AND SEX, IOWA, 1992



Source: 1992 Behavioral Risk Factor Surveillance System, IDPH

Total Sample Size = 1728
Number at risk = 1085

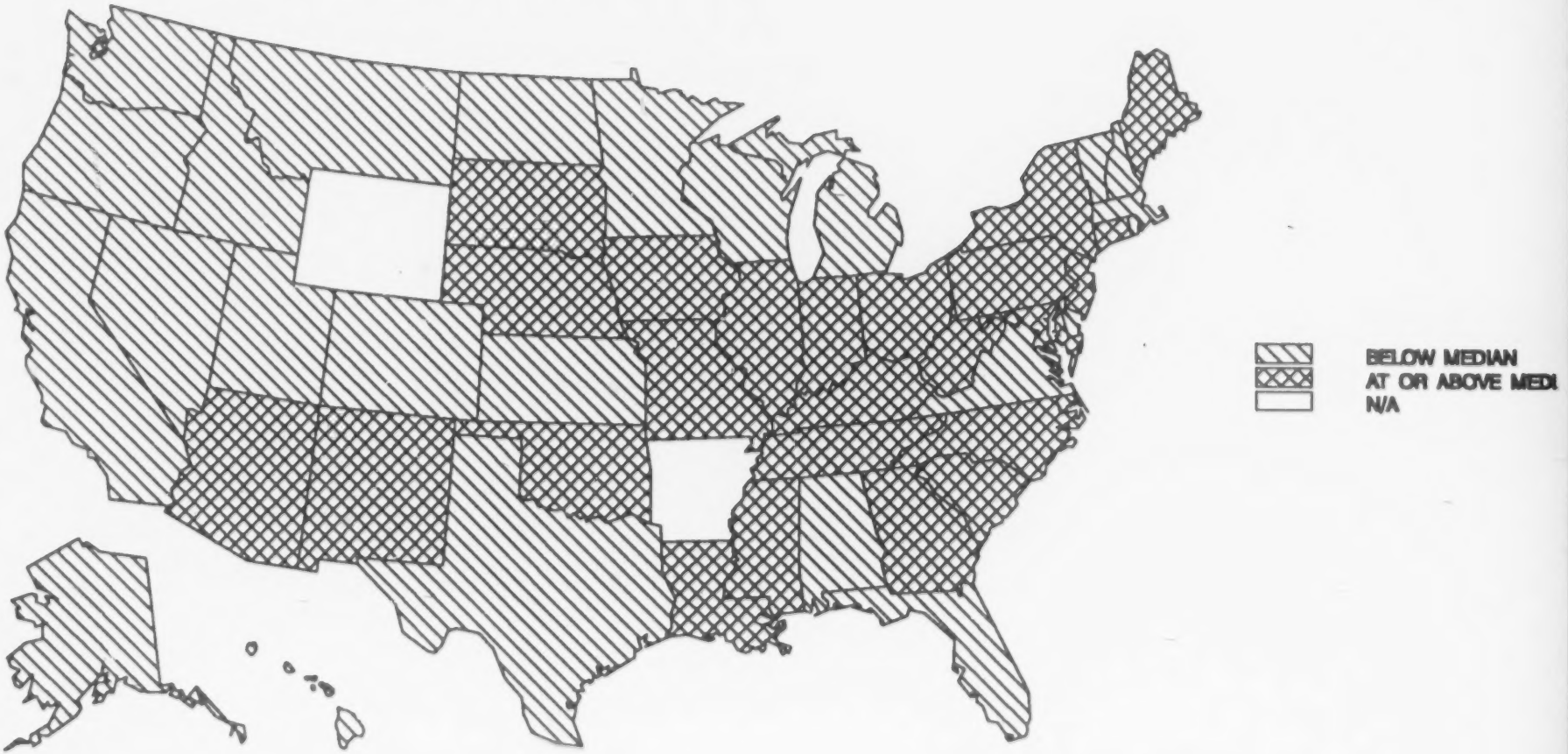
POPULATION PRACTICING A SEDENTARY LIFESTYLE 1989–1992



Source: 1989,1990, 1991,1992
BRFSS Summary Prevalence Report

1992 BRFSS PREVALENCE FOR SEDENTARY LIFESTYLE

LESS THAN 20 MINUTES OF EXERCISE, 3 TIMES A WEEK DURING MONTH



DIET AND OVERWEIGHT

Background

Obesity is probably the most serious nutrition problem in America today. Health experts agree that being overweight is a risk factor for many diseases. Obesity is associated with the onset and progression of high blood pressure, diabetes, and atherosclerosis[1]. Obese individuals are also at increased risk for stroke, gallbladder disease and degenerative joint disease[2].

The origin of overweight is multifactorial. It reflects inherited, environmental, cultural and socioeconomic traits[1]. The prevalence of overweight among adults has not declined for twenty years[1]. Overweight tends to increase with age until about age 50 for men and age 70 for women[3].

Exact measurements of body fat require sophisticated equipment. To circumvent this, obesity is often estimated from weight standards that are adjusted for body frame. Two methods commonly used to estimate obesity are relative weight and body mass index. Relative weight is defined as actual body weight divided by the desirable weight for a person of medium frame. Body mass index (BMI) is defined as a person's body weight in kilograms divided by their height in meters squared [weight (kg)/height (m^2)]. Both relative weight and body mass index correlate roughly with health risk and longevity[4]. However, experts feel body mass index is a more precise measurement[5]. Therefore, the estimation of the prevalence of overweight is based on BMI.

Health experts recommend a well-balanced, low-fat, high-fiber diet which offers a wide variety of foods as the best way to control weight. Such a diet enables the individual to maintain lifelong dietary habits. Regular exercise, too, is important to successful weight management. Exercise burns excess calories, and improves the body's overall fitness.

Rigid, calorie-restricted diets are not recommended for weight management. They limit the type, amount, palatability and variety of food intake, and are often nutritionally unbalanced, unsafe and difficult to follow.

Given that weight management is difficult for most people, the Healthy People 2000 goals set for adults are ambitious. However, any reduction in the prevalence of overweight provides considerable public health benefits and deserves attention and emphasis. Strategies to achieve

this objective include (1) improved accessibility of culturally relevant nutrition information and education to the general public, (2) a strong national program of basic and applied nutrition research, (3) development of the scope and magnitude of the National Nutrition Monitoring System and (4) development of a sustained program to implement and evaluate the nutrition objectives[1].

Overweight in Iowa

Definition:

Overweight based on body mass index (BMI) is defined as weight in kilograms divided by height in meters squared [weight (kg)/height (m^2)]. For females, overweight is defined as BMI $\geq$ 27.3 and for males it is defined as BMI $\geq$ 27.8.

The BRFSS data show that 26.9% of Iowans are overweight based on BMI. The self-reported weights show 30.5% of males and 23.6% of females are overweight based on BMI.

Comparison With Other States

In 1992, Iowa had the tenth highest prevalence of overweight based on BMI out of the 49 states conducting the BRFSS. The national median was 24.36%, while Iowa reports 26.86% of the adult population as overweight.

Year 2000 Health Objectives for the Nation

The Year 2000 Health Objectives state the prevalence of overweight should be reduced to 20% among people ages 20 through 74 years. The 1992 prevalence of overweight for men (30.5%) and women (23.6%) needs to be decreased by approximately 10 percentage points for males and 3 percentage points for females to achieve this objective for Iowa.

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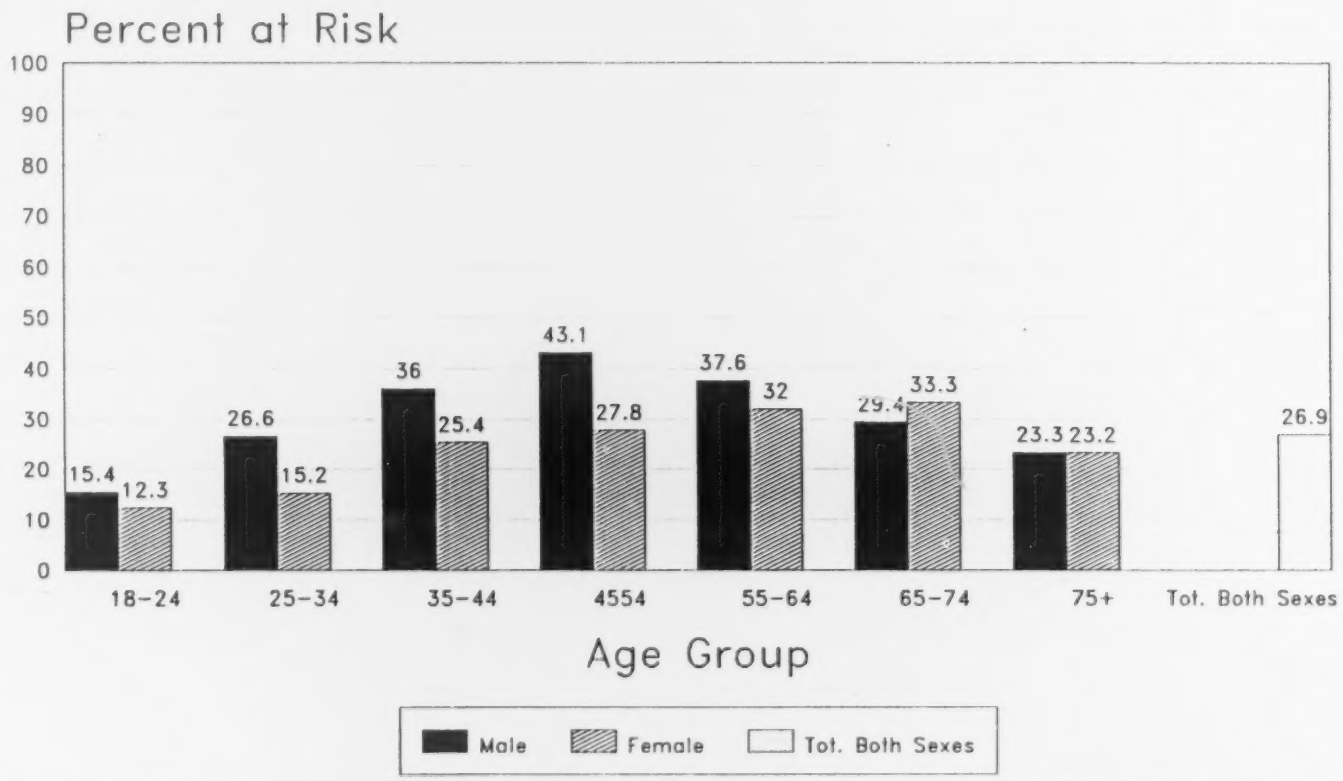
Population At Risk For Overweight Based on Body Mass Index (BMI)* by Age and Sex, Iowa, 1992

Sex	Age Group	Total Sample Size N	At Risk for Overweight n	%
Male	18-24	86	12	15.4
	25-34	157	43	26.6
	35-44	186	67	36.0
	45-54	97	42	43.1
	55-64	95	36	37.6
	65-74	79	24	29.4
	75+	51	10	23.3
	Unknown/ Refused	1	0	0.0
	Total	754	233	30.5
Female	18-24	89	12	12.3
	25-34	181	27	15.2
	35-44	199	52	25.4
	45-54	117	33	27.8
	55-64	103	31	32.0
	65-74	146	50	33.3
	75+	132	29	23.2
	Unknown/ Refused	8	1	15.4
	Total	974	235	23.6
Total (both sexes)	18-24	175	24	13.9
	25-34	340	70	20.8
	35-44	385	120	30.7
	45-54	214	73	35.5
	55-64	198	67	34.7
	65-74	224	74	31.7
	75+	183	39	23.2
	Unknown/ Refused	9	1	14.1
	Total	1728	468	26.9

*Overweight - Body Mass Index is defined as weight in kilograms divided by height in meters squared (Weight(kg)/Height(m^2). For females, overweight is BMI $\geq$ 27.3 and for males, BMI $\geq$ 27.8.

Data collected from the 1992 Behavioral Risk Factor Surveillance System, Bureau of Health Promotion, Iowa Department of Public Health.

POPULATION AT RISK FOR OVERWEIGHT BASED ON BODY MASS INDEX BY AGE AND SEX, IOWA, 1992

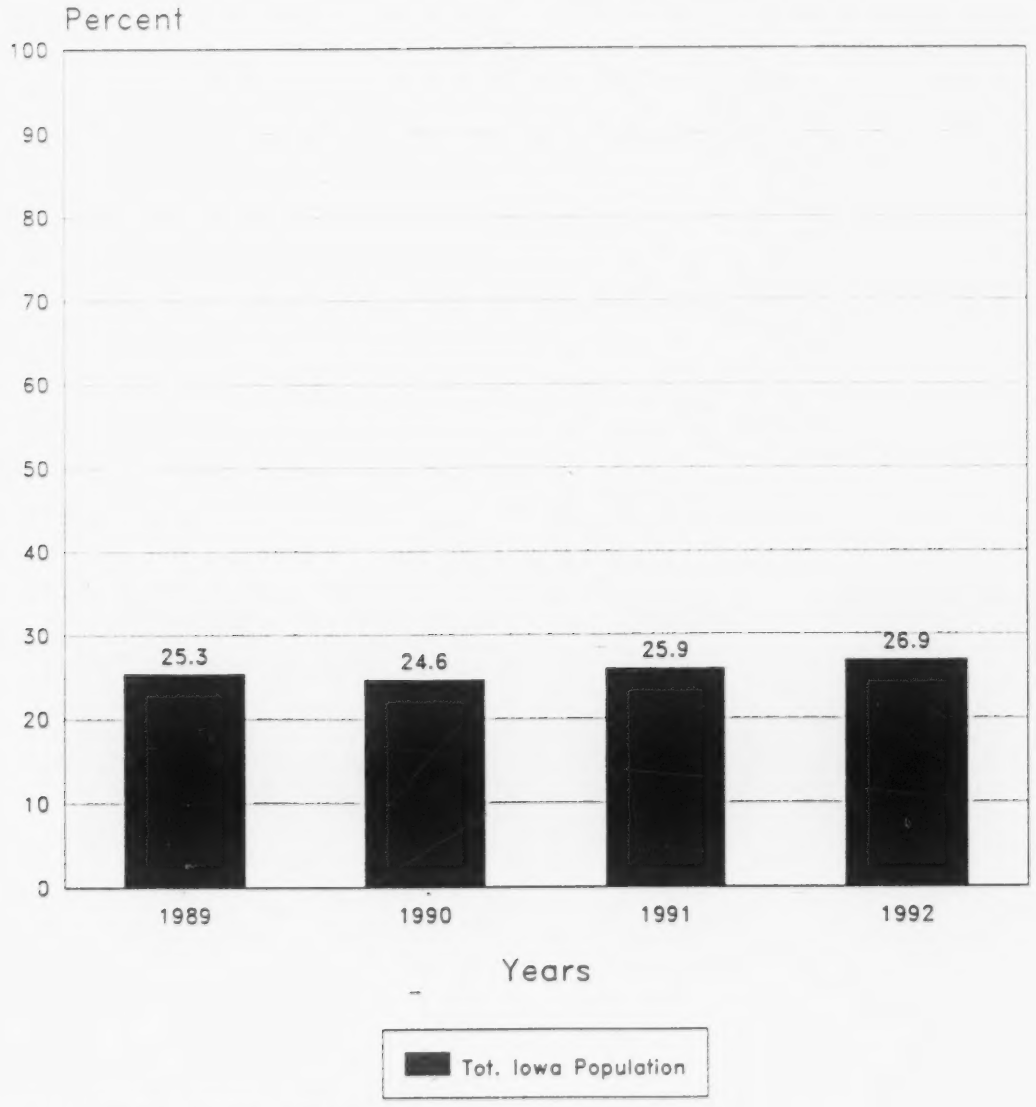


Source: 1992 Behavioral Risk Factor Surveillance System, IDPH

Total Sample Size = 1728

Number at Risk = 468

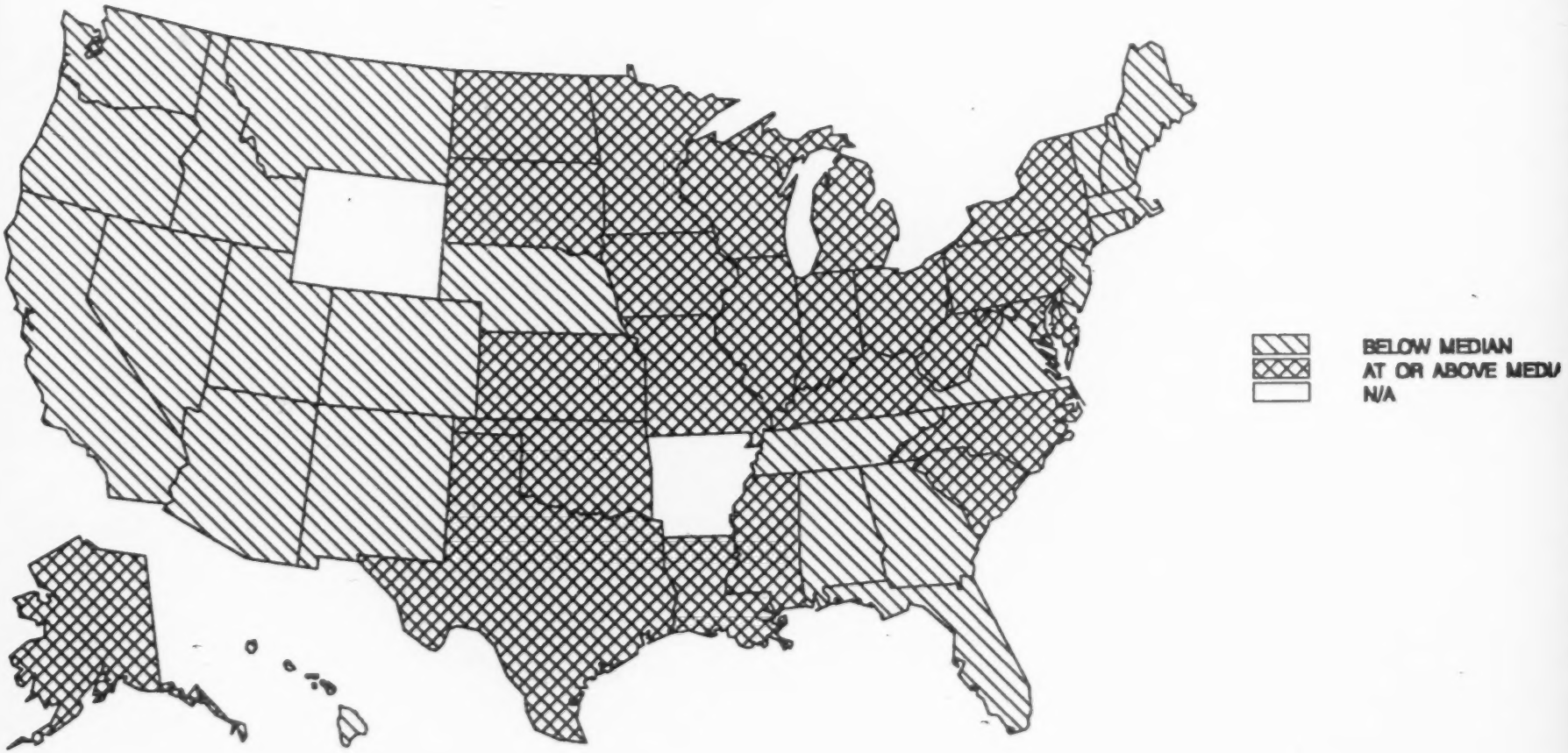
POPULATION OVERWEIGHT: BASED ON BODY MASS INDEX (BMI) 1989–1992



Source: 1989, 1990, 1991, 1992
BRFSS Summary Prevalence Reports

1992 BRFSS PREVALENCE FOR OVERWEIGHT: BY BODY MASS INDEX

BODY MASS INDEX GE 27.8 FOR MALES AND 27.3 FOR FEMALES



TOBACCO USE

Background

Tobacco use is the single most important preventable cause of death and disease in the United States[1]. It is a major risk factor for heart and blood vessel disease; cancers of the lung, larynx, pharynx, oral cavity, esophagus, pancreas, and bladder; respiratory infections; and stomach ulcers[1]. An estimated 390,000 deaths are associated with cigarette smoking each year in our nation[1].

Tobacco use in the United States has seen a dramatic reduction over the past 25 years. The decrease in the national smoking prevalence from 40% in 1965 to 29% in 1987 has prevented or postponed an estimated 789,200 smoking-related deaths[1]. Each of these prevented or postponed deaths represents an average of 21 years gained in life expectancy[1]. The decline has been substantially slower among women than among men.

Unfortunately, tobacco use is still responsible for one of every six deaths in the United States[1]. Nearly one third of all adults in the United States still smoke. The prevalence of smoking is particularly high among blacks, blue-collar workers and people with few years of education[1].

Cigarette smoking is the major cause of lung cancer. Lung cancer risk is proportional to the number of cigarettes smoked daily and duration of time smoked. There is currently no effective treatment for lung cancer. Nearly 90% of lung cancer patients die within 5 years of diagnosis[1].

Two strategies to reduce the prevalence of cigarette smoking are (1) intensified efforts to discourage young people from starting to smoke and (2) increasing the number of smokers who quit.

While the rate of cigarette smoking is declining, the use of smokeless tobacco by adolescent males has increased by 40% over the past 20 years[1]. Strategies to impact the increasing rate of smokeless tobacco use will be a challenge, but may include the adoption of a comprehensive health education curriculum in grades K-12 with objectives for prevention of tobacco use .

Tobacco Use in Iowa

In 1992, 19.3% of adult Iowans reported to be current smokers. Approximately 22.9% of males reported to be current smokers while 16.0% of females were current smokers. Of the current smokers who made an attempt to quit, 50.0% reported quitting for 1 day or longer in the past year. Of persons who have smoked 100 cigarettes in their lifetime and do not currently smoke, 72.0% had their last cigarette 5 or more years ago, 17.6% had their last between 1 and 5 years ago, 2.3% between 6 to 12 months, 2.6% between 3 to 6 months, 1.6% between 1 to 3 months, 1.9% less than 1 month ago, and 0.8% refused to answer the question.

Of 1728 Iowans surveyed, 9.9% have tried smokeless tobacco and 4.1% are current smokeless tobacco users. None of the 974 women surveyed reported any use of smokeless tobacco during their lifetime. Of the 754 males surveyed, 8.7% reported they were current users of smokeless tobacco. In the male age group of 18-24, 12.4% reported current use. The 25-34 male age group had 10.2% current usage and 10.9% of the 65+ age group reported current usage.

Of the 9.9% (171 Iowans) who have tried smokeless tobacco, 29.8% currently use chewing tobacco, 6.9% currently use snuff and 1.8% currently use both.

Comparison With Other States

In 1992, Iowa ranked eighth out of the 49 states participating in the BRFSS for having the lowest prevalence of cigarette smoking. The national median was 22.17%, while Iowa reported 19.3 % of the adult population as being current smokers.

Year 2000 Health Objectives for the Nation

The Year 2000 Health Objectives state that the prevalence of cigarette smoking should be no more than 15% among people age 20 and older. The 1992 BRFSS sample reported 19.3% of Iowans age 18 and older as current smokers. Since the age groups are not comparable to the Year 2000 Health objectives, no conclusions can be drawn.

The Year 2000 Health Objectives state that the prevalence of smokeless tobacco use should be no more than 4% among males age 12 through 24. The 1992 BRFSS sample reported 12.4% of males 18 through 24 are current users of chewing tobacco, snuff or both. Since the age groups are not comparable to the Year 2000 Health Objectives, no conclusions can be drawn.

BIBLIOGRAPHY FOR TOBACCO

1. U.S. Department of Health and Human Services: Healthy People 2000: National Health Promotion and Disease Prevention Objectives. Public Health Service, DHHS Publication No. (PHS) 91-50213, 1991.

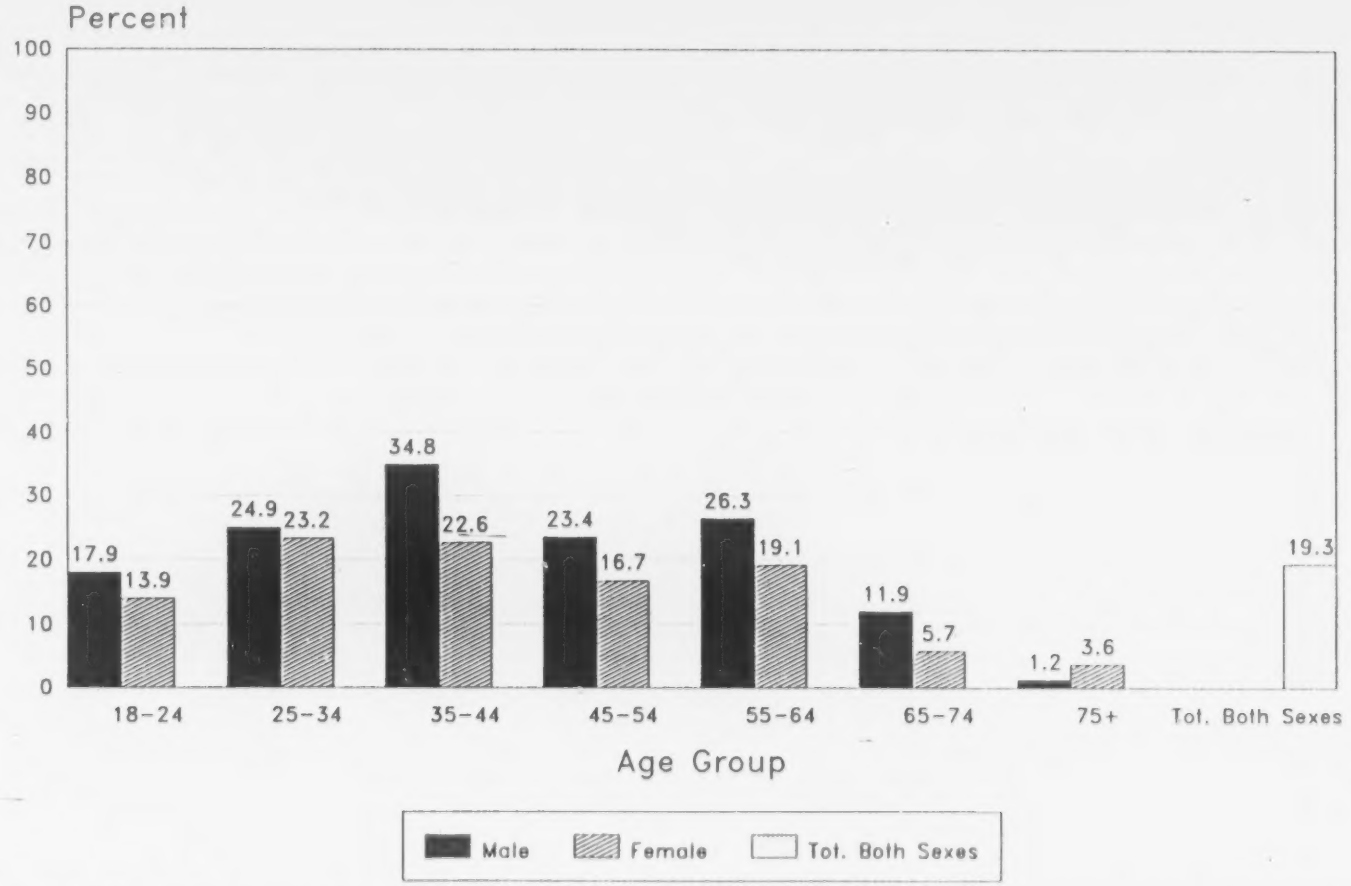
Current Smokers* by Age and Sex
Iowa, 1992

Sex	Age Group	Total Sample Size N	Current Smokers n	%
Male	18-24	86	17	17.9
	25-34	159	38	24.9
	35-44	186	67	34.8
	45-54	97	26	23.4
	55-64	95	25	26.3
	65-74	79	11	11.9
	75+	51	1	1.2
	Unknown/ Refused	1	1	100.0
	Total	754	186	22.9
Female	18-24	89	13	13.9
	25-34	181	43	23.2
	35-44	199	45	22.6
	45-54	117	22	16.7
	55-64	103	23	19.1
	65-74	145	9	5.7
	75+	132	5	3.6
	Unknown/ Refused	8	0	0.0
	Total	974	160	16.0
Total (both sexes)	18-24	175	30	16.0
	25-34	340	81	24.0
	35-44	385	112	28.7
	45-54	214	48	20.0
	55-64	198	48	22.5
	65-74	224	20	8.2
	75+	183	6	2.7
	Unknown/ Refused	9	1	8.3
	Total	1728	346	19.3

*Current Smokers - Ever smoked 100 cigarettes and smoke now.

Data collected from the 1992 Behavioral Risk Factor Surveillance System, Bureau of Health Promotion, Iowa Department of Public Health.

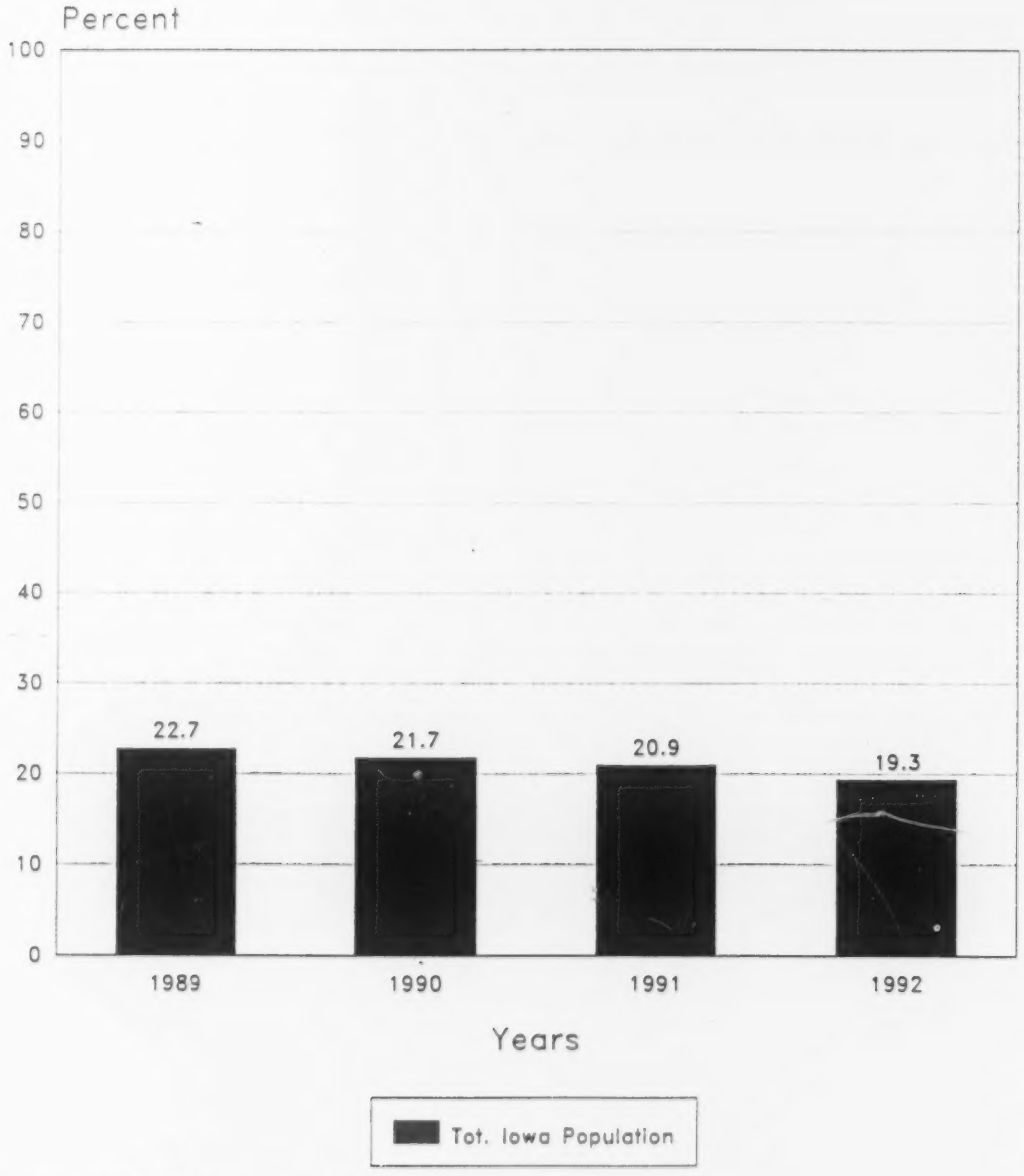
CURRENT SMOKERS BY AGE AND SEX, IOWA, 1992



Source: 1992 Behavioral Risk Factor Surveillance System, IDPH

Total Sample Size = 1728
Number at Risk = 346

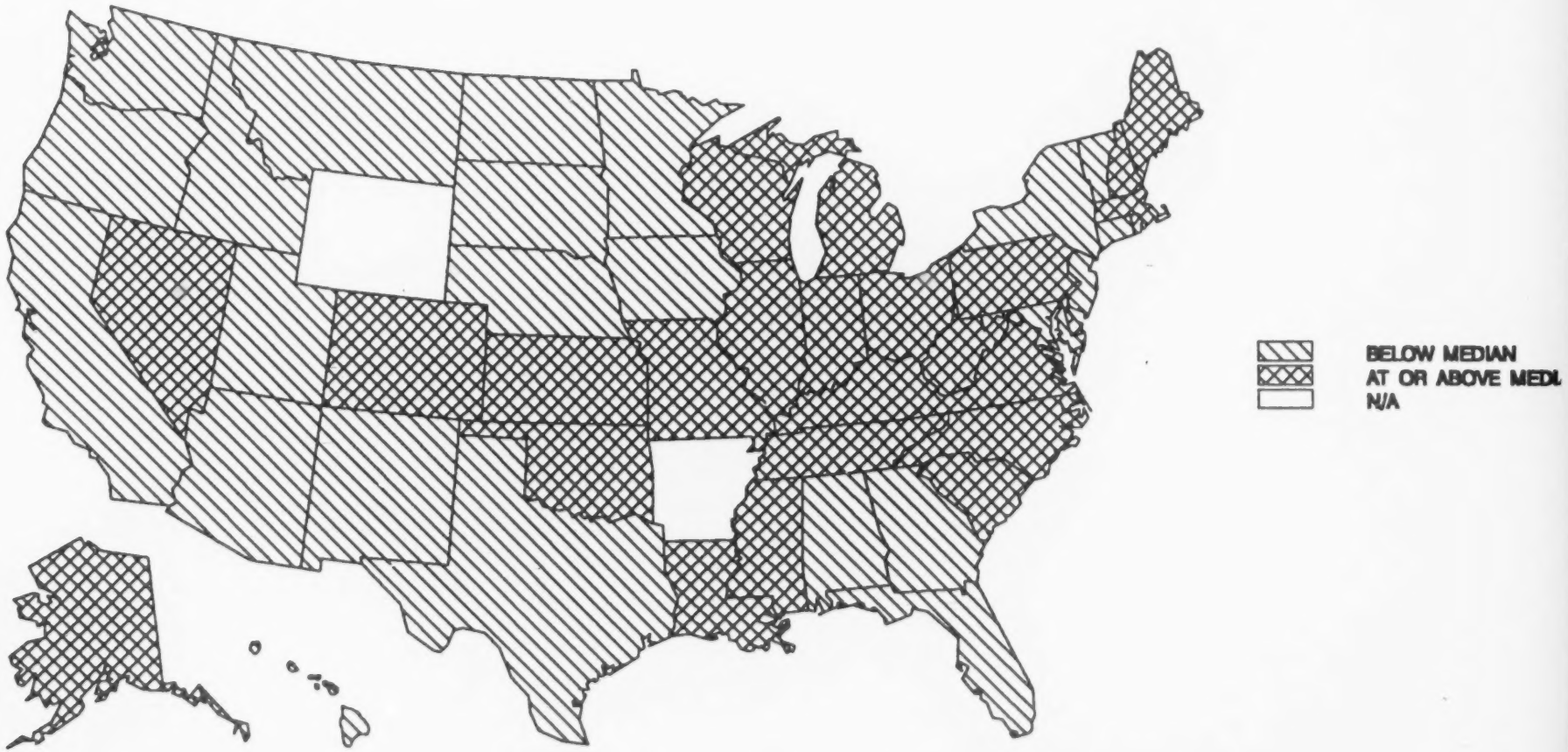
CURRENT REGULAR SMOKERS
1989–1992



Source: 1989,1990,1991,1992
BRFSS Summary Prevalence Reports

1992 BRFSS PREVALENCE FOR CURRENT REGULAR SMOKERS

EVER SMOKED 100 CIGARETTES AND A CURRENT REGULAR SMOKER



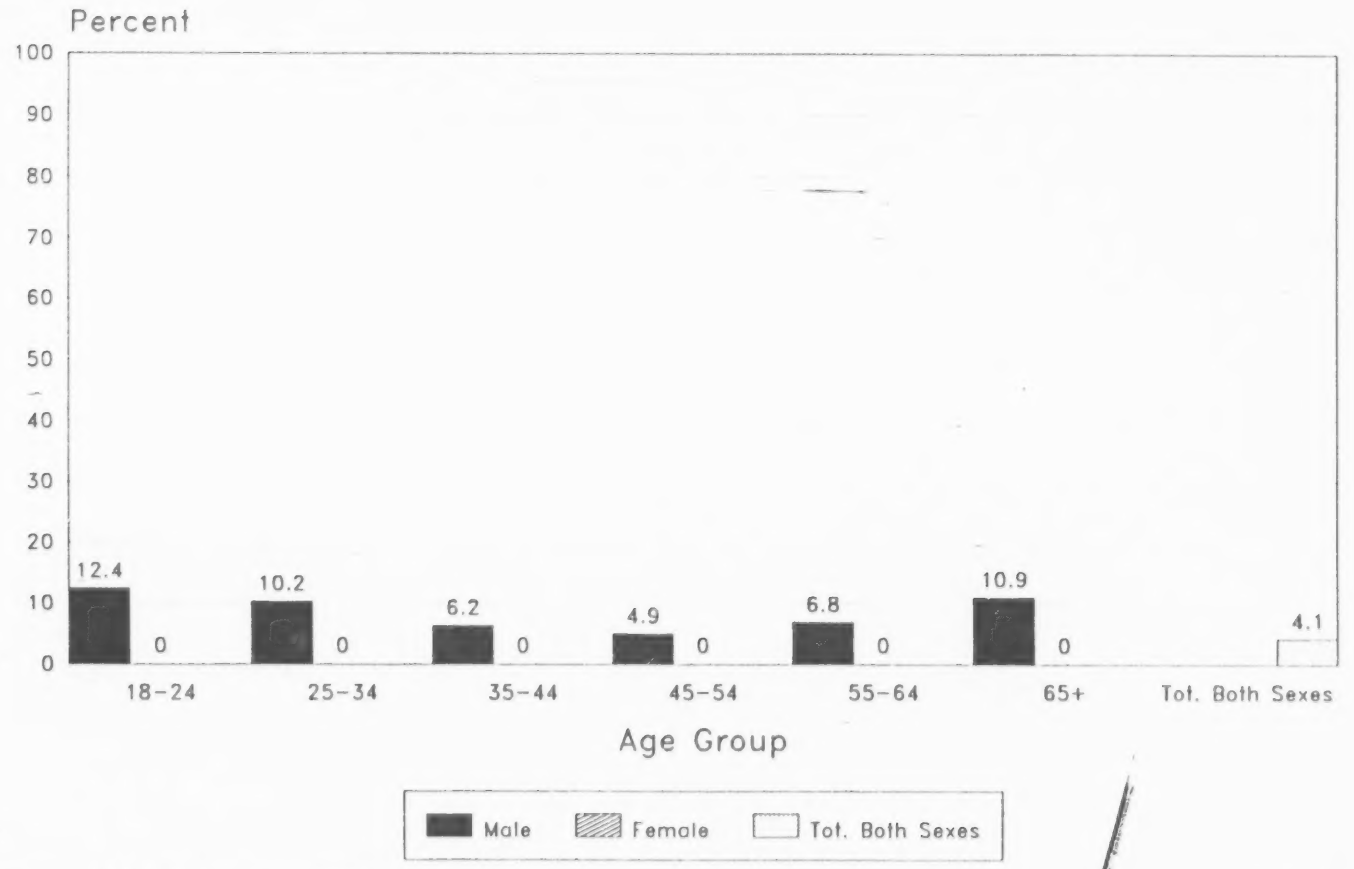
Population Who Are Currently Using Smokeless Tobacco by Age and Sex, Iowa, 1992

Sex	Age Group	Total Sample Size N	Population Using Smokeless Tobacco n	%*
Male	18-24	86	10	12.4
	25-34	159	17	10.2
	35-44	186	12	6.2
	45-54	97	4	4.9
	55-64	95	6	6.8
	65+	130	13	10.9
	Unknown/ Refused	1	0	0.0
	Total	754	62	8.7
Female	18-24	89	0	
	25-34	181	0	
	35-44	199	0	
	45-54	117	0	
	55-64	103	0	
	65+	277	0	
	Unknown/ Refused	8	0	
	Total	974	0	0.0
Total (both sexes)	18-24	175	10	6.3
	25-34	340	17	5.1
	35-44	385	12	3.1
	45-54	214	4	2.5
	55-64	198	6	3.3
	65+	407	13	4.3
	Unknown/ Refused	9	0	0.0
	Total	1728	62	4.1

*Non-Weighted

Data collected from the 1992 Behavioral Risk Factor Surveillance System, Bureau of Health Promotion, Iowa Department of Public Health.

POPULATION USING SMOKELESS TOBACCO BY AGE AND SEX, IOWA, 1992



Source: 1992 Behavioral Risk Factor Surveillance System, IDPH

Total Sample Size = 1728
Number at risk = 346

ALCOHOL USE

Background

Alcohol is responsible for more than 100,000 deaths each year[1] and is the leading cause of death for persons under 21[2]. This includes all deaths for which alcohol is the underlying cause. An alcohol-related problem strikes one of every four families[3]. Approximately half of all motor vehicle accidents are alcohol related. Alcohol is implicated in nearly half of all intentional suicides and homicides[4]. Approximately one-third of drownings and boating crashes are related to alcohol intoxication[4].

Alcohol dependency and abuse is a major public health problem carrying a large economic cost and placing heavy demands on the health care system. In 1984, alcohol abuse cost the nation an estimated $116 billion[4].

The minimum drinking age has been changed to 21 in all states. This limits consumption of alcoholic beverages, but does not address access to alcohol. Studies show that higher prices on alcoholic beverages will reduce the number of young people (age 16-21) who drink, the incidence of heavy drinking and frequent drinking[5].

Strategic plans to limit alcohol consumption include (1) increased taxes imposed on alcohol, (2) restrict or control the serving of alcoholic beverages in settings where young people comprise the majority of the audience, (3) set limits on the advertising and promotion of alcohol, (4) surveillance of the consequences of alcohol and (5) early education and interventions for youth.

Alcohol Abuse in Iowa

Definition:

Binge Drinking:	Respondents who report having five or more drinks on an occasion, one or more times in the past month.
Current Drinking:	Respondents who report having had alcoholic beverages in the past month.
Drinking and Driving:	Respondents who report having driven after having too much to drink, one or more times in the past month.

Chronic Drinking: Respondents who report an average of 60 or more alcoholic drinks a month.

An estimated 47.5% of the BRFSS participants consumed alcohol in the past month (current drinking). Of the 442 males, 57.7% were current drinkers while 38.3% of the 370 females, drank alcohol in the past month.

In 1992, an estimated 11.1% of adult Iowans were engaged in binge drinking (having five or more drinks on an occasion, one or more times in the past month). Of the 754 males, 16.20% were binge drinkers. Of the 974 females, 6.6% were binge drinkers.

An estimated 2.6% of adult Iowans were at risk for chronic drinking (having an average of 60 or more drinks a month). Of the 754 males, 5.0% were at risk for chronic drinking. The total sample of 974 females found only .4% of females at risk for chronic drinking.

Of Iowans who reported drinking during the previous month, 97.8% reported not driving after having had too much to drink. Too much to drink is self defined; therefore, these numbers may be under reported because people use different definitions of too much to drink.

Comparison With Other States

Of the 49 states participating in BRFSS, 18 had a lower percentage of current drinkers (having had alcoholic beverages during the past month) than Iowa. The prevalence of current drinking in Iowa was 47.5%, while the median for participating states was 50.5%.

Of the 49 states participating in BRFSS, 15 had a lower prevalence of binge drinking (having five or more drinks on an occasion one or more times during the past month) than Iowa. The prevalence of binge drinking in Iowa was 11.1%, while the median for participating states was 14.3%.

Of the 49 states participating in BRFSS, 18 had a lower prevalence of chronic drinkers (having sixty or more drinks during the past month) than Iowa. The prevalence of chronic drinking in Iowa was 2.6%, while the median for participating states was 2.9%.

Of the 49 states participating in BRFSS, 20 had a lower prevalence of drinking and driving (driving after having too much to drink, one or more times during the past month) than Iowa.

The prevalence of drinking and driving in Iowa was 2.2%, while the median for participating states was 2.3%.

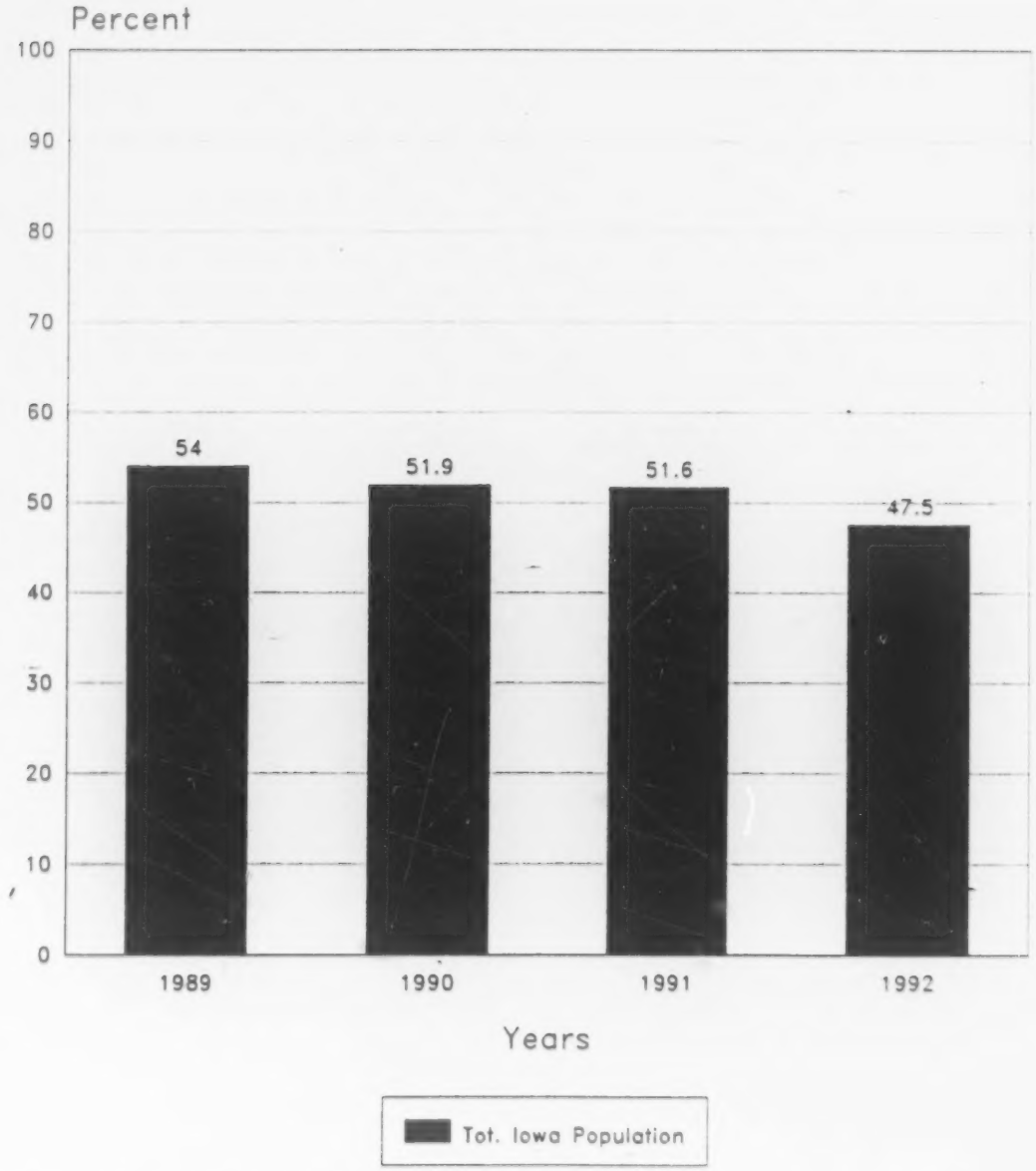
Year 2000 Health Objectives For the Nation

The Year 2000 Health Objectives relate to health status, risk reduction, and service and protection to reduce alcohol and other drug problems. They do not include objectives related to alcohol consumption as defined by the 1992 BRFSS.

BIBLIOGRAPHY FOR ALCOHOL USE

1. Centers for Disease Control, Morbidity and Mortality Weekly Report, Vol. 39, No. 11 March 23, 1990, p. 174.
2. Centers for Disease Control, Morbidity and Mortality Weekly Report, Vol. 40, No. 48, December 6, 1991, pp. 821-22.
3. Gallup Poll, "Alcohol-Related Family Problems Strike one-Fourth of U.S. Homes," April, 1987.
4. U.S. Department of Health and Human Services: Healthy People 2000: National Health Promotion and Disease Prevention Objectives. Public Health Service, DHHS Publication No. (PHS) 91-50213, 1991.
5. National Institute of Alcohol Abuse and Alcoholism. Seventh Special Report to the U.S. Congress on Alcohol and Health. Washington, D.C.: U.S. Department of Health and Human Services, 1990.

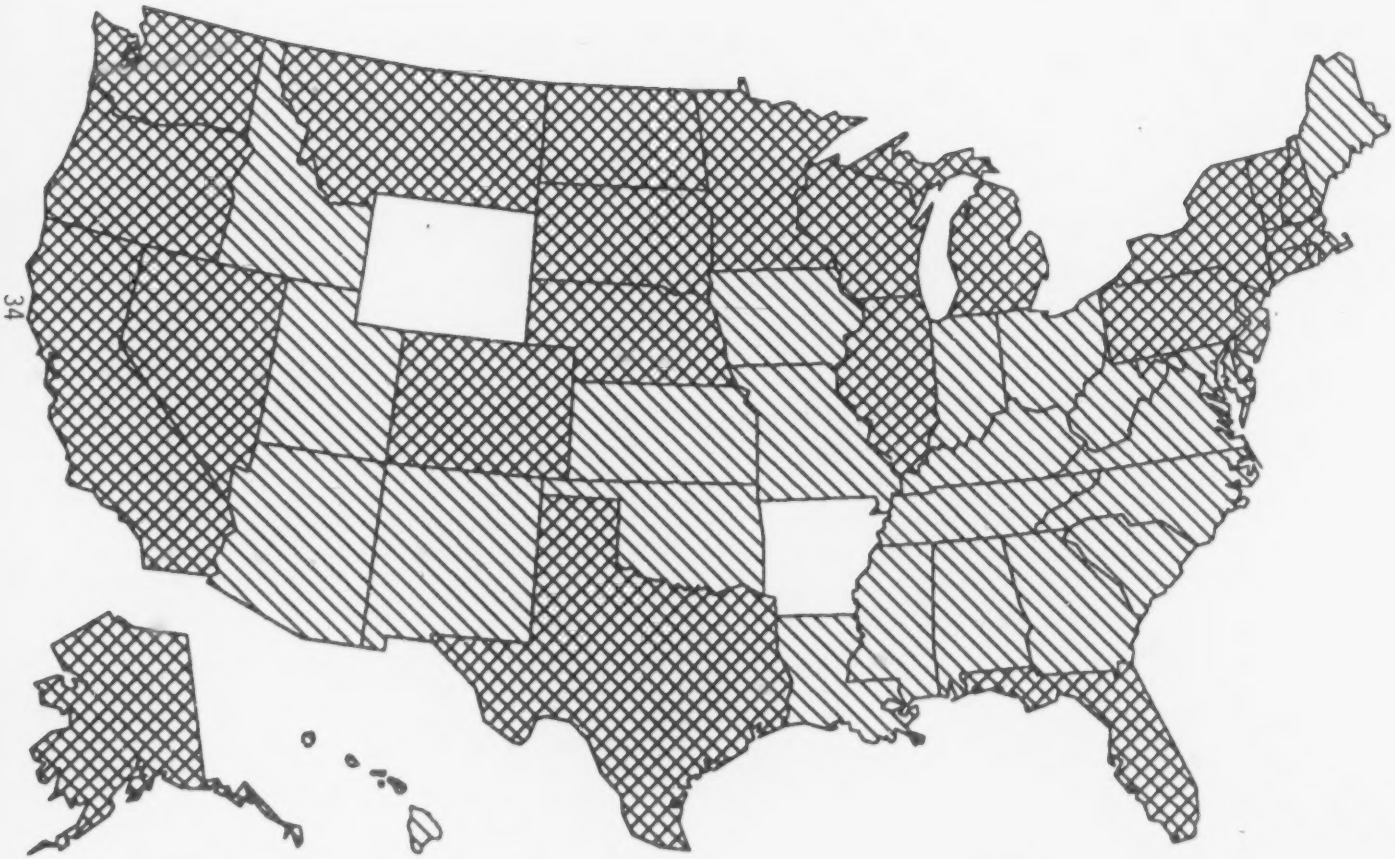
POPULATION CURRENTLY DRINKING
1989–1992



Source: 1989, 1990, 1991, 1992
BRFSS Summary Prevalence Report

1992 BRFSS PREVALENCE FOR CURRENT DRINKERS

HAD ALCOHOLIC BEVERAGES DURING THE PAST MONTH



BELOW MEDIAN
AT OR ABOVE MEDIA
N/A

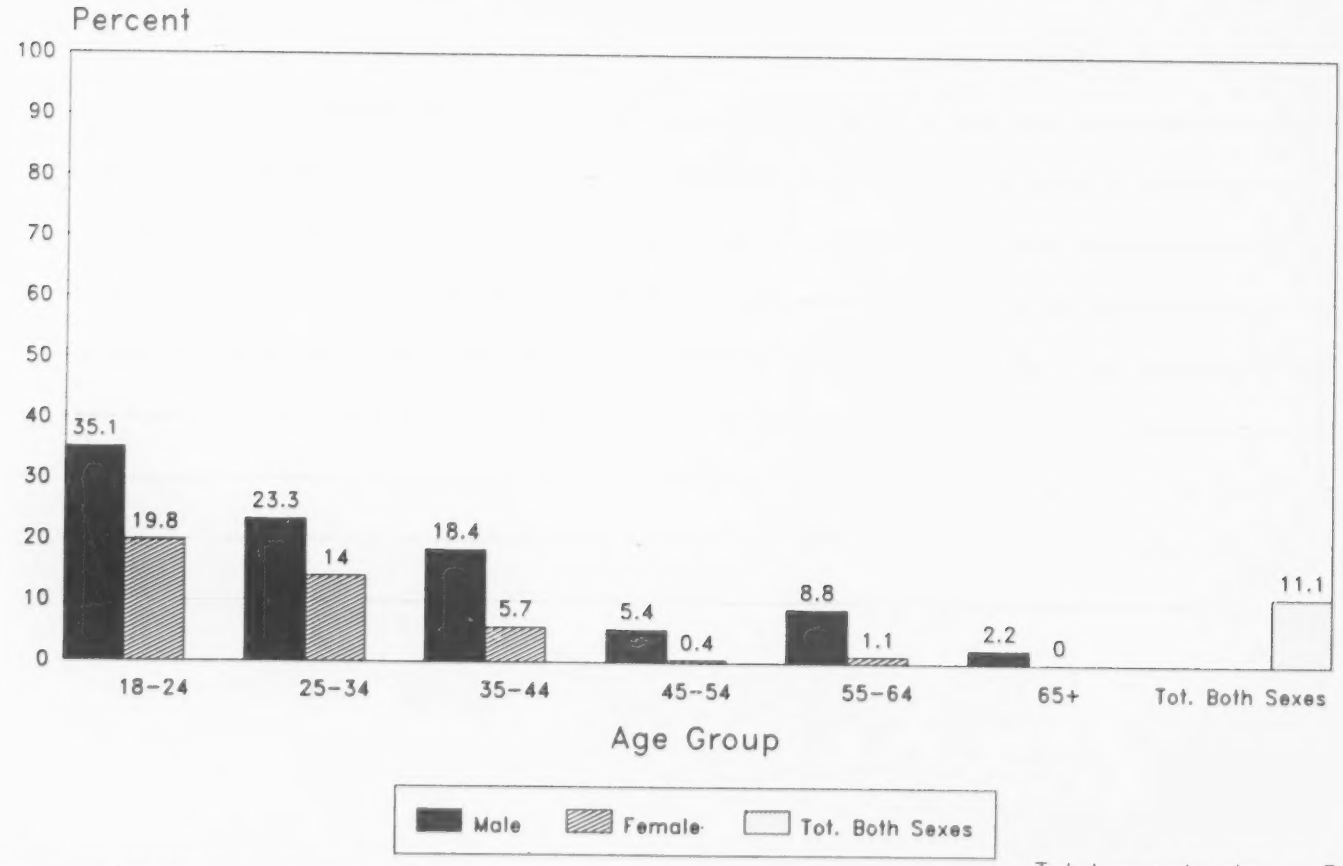
Population At Risk For Binge Drinking* by Age and Sex, Iowa, 1992

Sex	Age Group	Total Sample Size N	At Risk for Acute Drinking n	%
Male	18-24	86	34	35.1
	25-34	159	38	23.3
	35-44	186	35	18.4
	45-54	97	6	5.4
	55-64	95	9	8.8
	65+	130	3	2.2
	Unknown/ Refused	1	0	0.0
	Total	754	125	16.2
Female	18-24	89	16	19.8
	25-34	181	27	14.0
	35-44	199	14	5.7
	45-54	117	1	0.4
	55-64	103	2	1.1
	65+	277	0	0.0
	Unknown/ Refused	8	0	0.0
	Total	974	63	6.6
Total (both sexes)	18-24	175	50	27.6
	25-34	340	65	18.6
	35-44	385	49	12.1
	45-54	214	7	2.9
	55-64	198	11	4.8
	65+	407	3	0.9
	Unknown/ Refused	9	0	0.0
	Total	1728	185	11.1

*Binge drinking - Respondents who report having five or more drinks on an occasion, one or more times in the past month.

Data collected from the 1992 Behavioral Risk Factor Surveillance System, Bureau of Health Promotion, Iowa Department of Public Health.

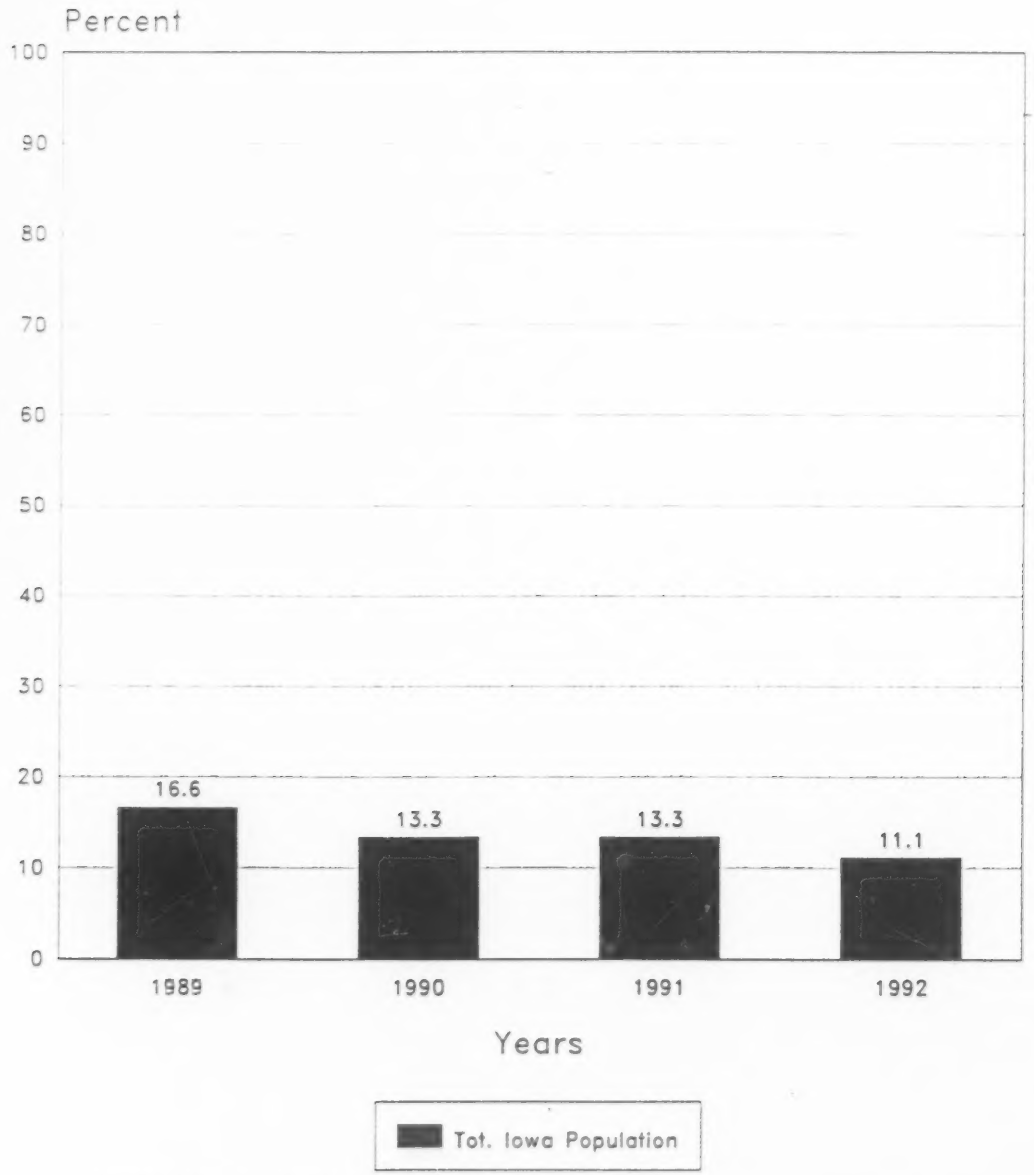
POPULATION AT RISK FOR BINGE DRINKING BY AGE AND SEX, IOWA, 1992



Source: 1992 Behavioral Risk Factor Surveillance System, IDPH

Total sample size = 812
Number at risk = 191

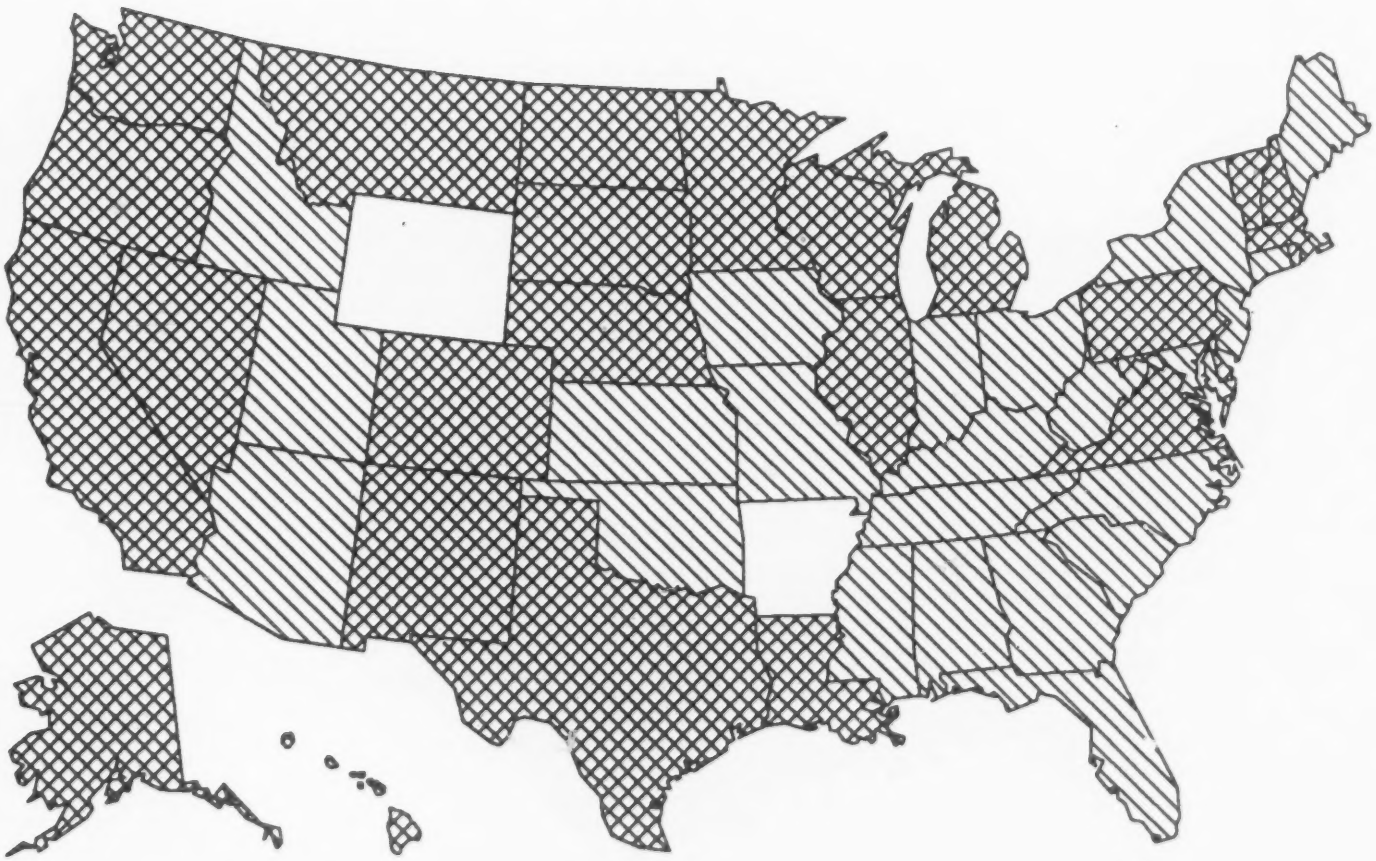
POPULATION BINGE DRINKING
1989–1992



Source: 1989, 1990, 1991, 1992
BRFSS Summary Prevalence Report

1992 BRFSS PREVALENCE FOR BINGE DRINKING

5 OR MORE DRINKS ON AT LEAST ONE OCCASION DURING THE PAST MONTH



BELOW MEDIAN
AT OR ABOVE MEDI
N/A

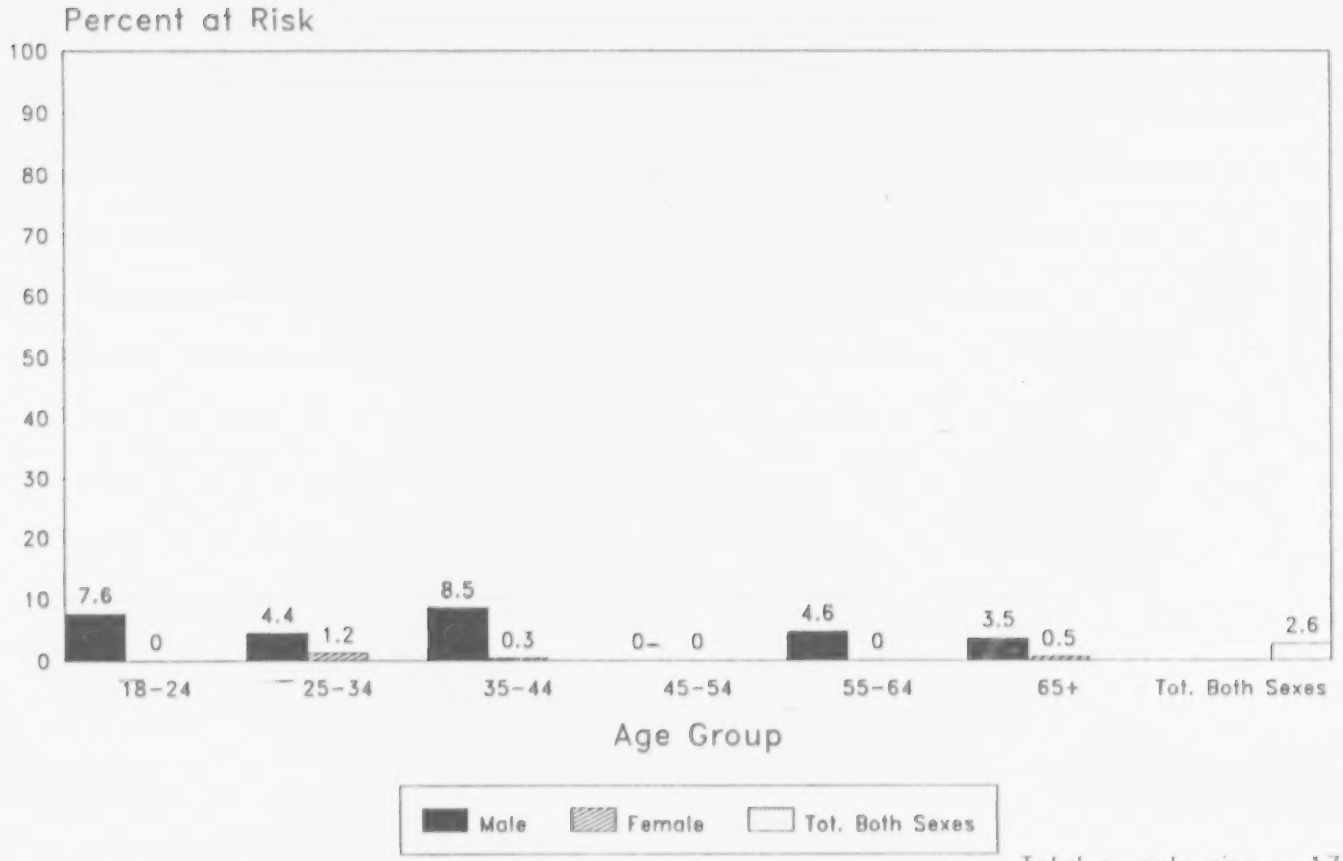
Population At Risk For Chronic Drinking* by Age and Sex, Iowa, 1992

Sex	Age Group	Total Sample Size N	At Risk for Chronic Drinking n	%
Male	18-24	86	7	7.6
	25-34	159	8	4.4
	35-44	186	15	8.5
	45-54	97	0	0.0
	55-64	95	6	4.6
	65+	130	5	3.5
	Unknown/ Refused	1	1	100.0
	Total	754	42	5.0
Female	18-24	89	0	0.0
	25-34	181	2	1.2
	35-44	199	1	0.3
	45-54	117	0	0.0
	55-64	103	0	0.0
	65+	277	1	0.0
	Unknown/ Refused	8	0	0.00
	Total	974	4	0.4
Total (both sexes)	18-24	175	7	3.8
	25-34	340	10	2.8
	35-44	385	16	4.4
	45-54	214	0	0.0
	55-64	198	6	2.2
	65+	407	6	1.7
	Unknown/ Refused	9	1	8.3
	Total	1728	46	2.6

*Chronic drinking - Respondents who report an average of 60 or more alcoholic drinks a month.

Data collected from the 1992 Behavioral Risk Factor Surveillance System, Bureau of Health Promotion, Iowa Department of Public Health.

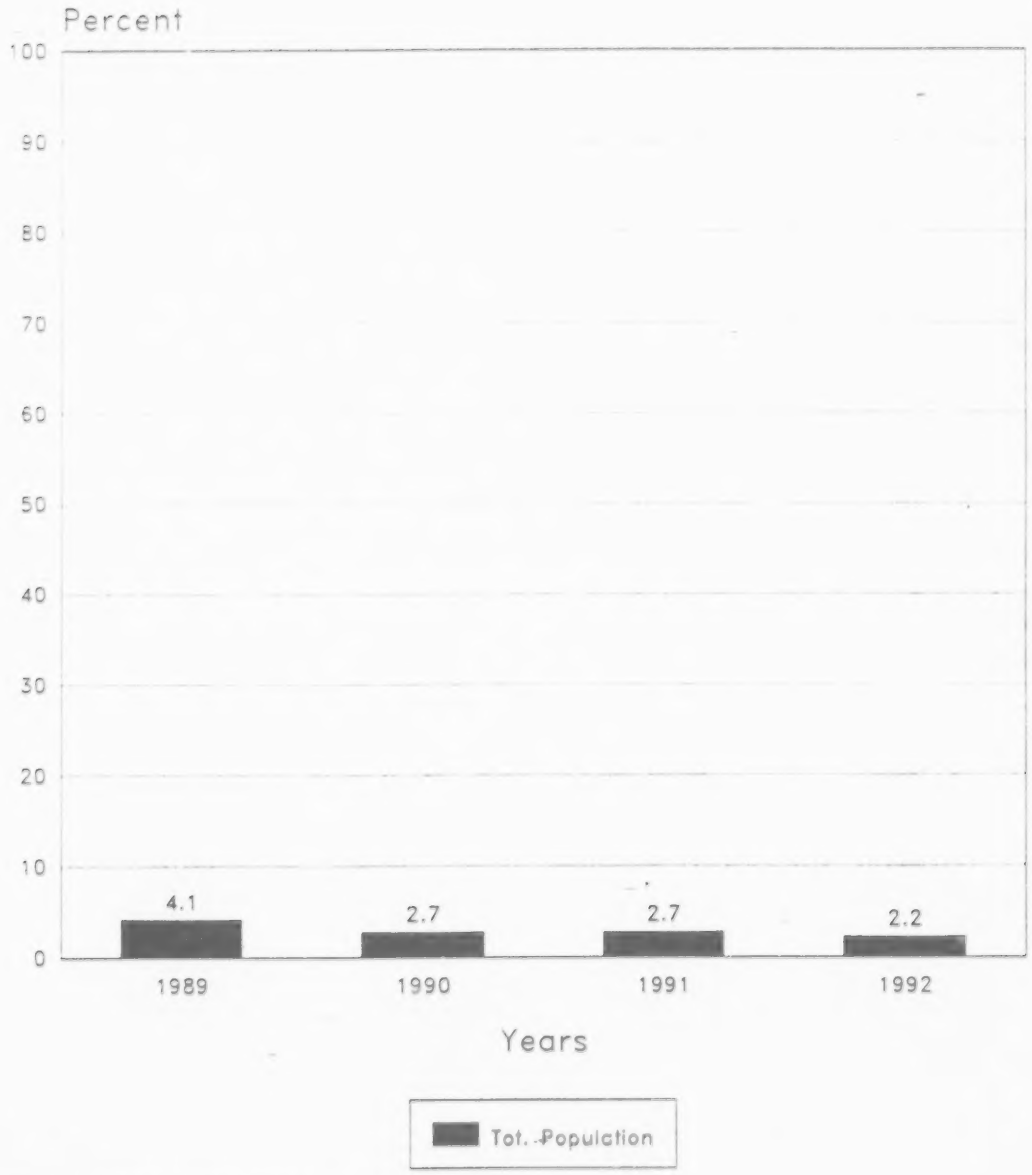
POPULATION AT RISK FOR CHRONIC DRINKING BY AGE AND SEX, IOWA 1992



Source: 1992 Behavioral Risk Factor Surveillance System, IDPH

Total sample size = 1728
Number at risk = 46

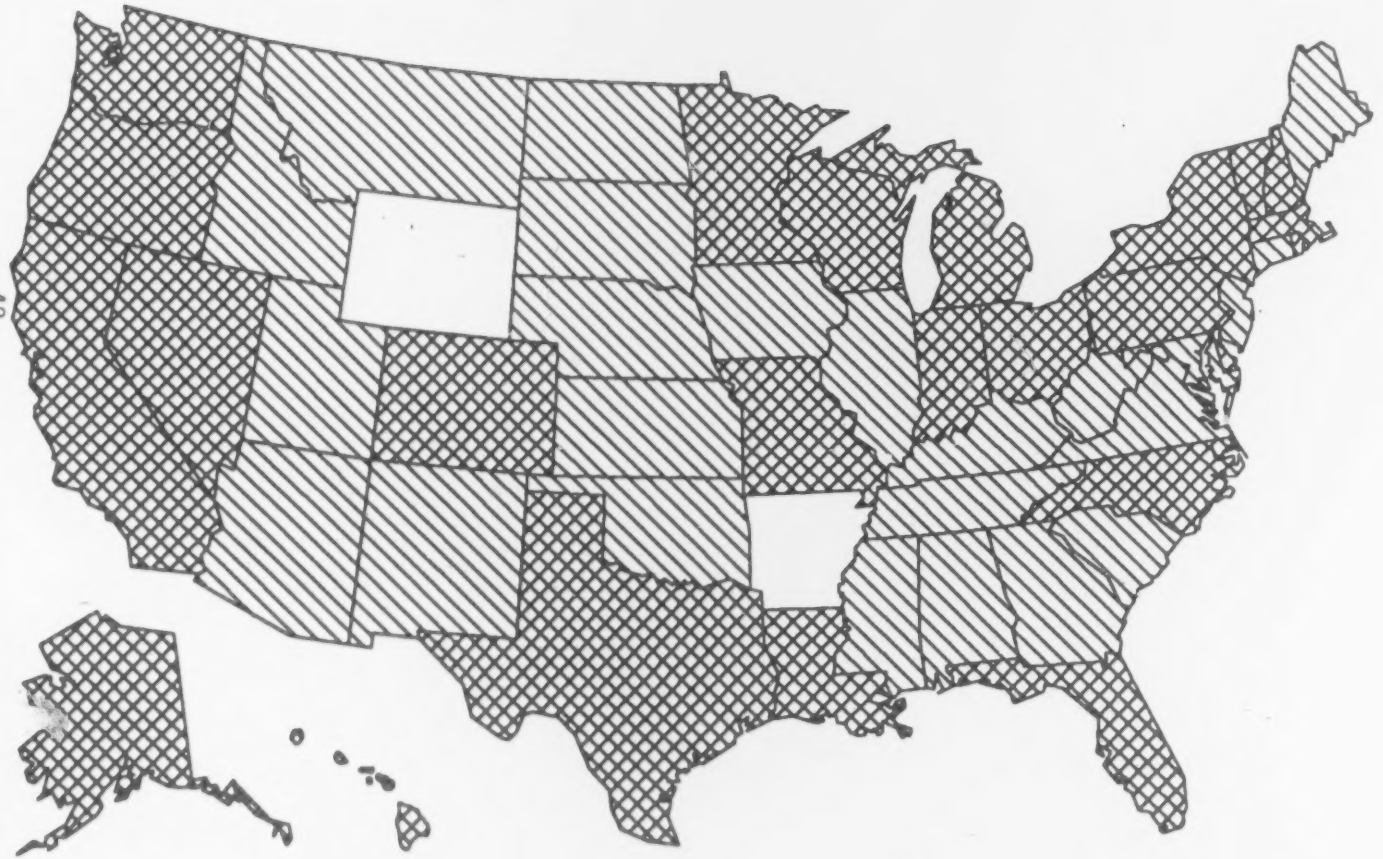
POPULATION CHRONIC DRINKING
1989–1992



Source: 1989,1990,1991,1992
BRFSS Summary Prevalence Reports

1992 BRFSS PREVALENCE FOR CHRONIC DRINKING

60 OR MORE DRINKS DURING PAST MONTH



BELOW MEDIAN
AT OR ABOVE MEDIA
N/A

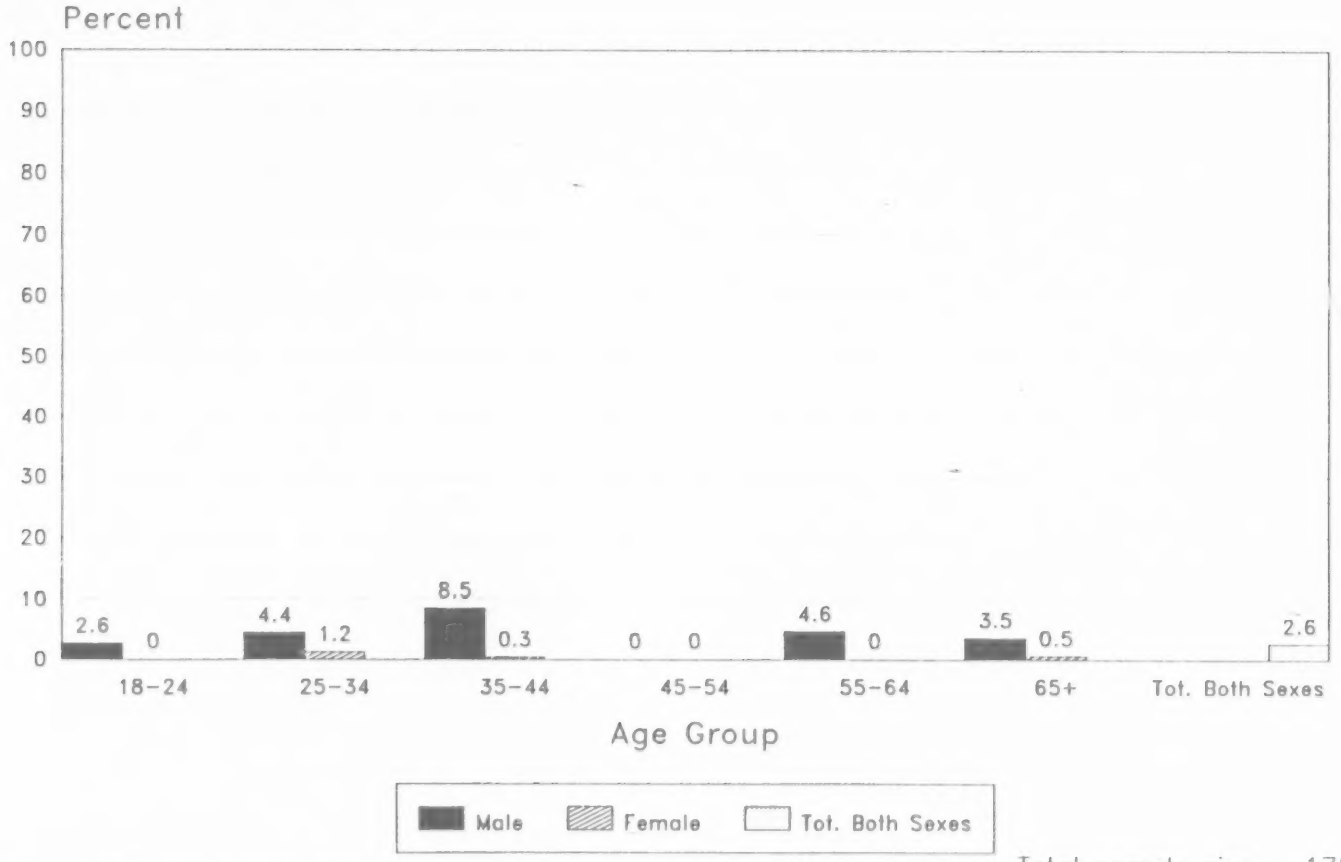
Population At Risk For Drinking and Driving* by Age and Sex, Iowa, 1992

Sex	Age Group	Total Sample Size N	At Risk for Drinking and Driving n	%
Male	18-24	86	10	9.8
	25-34	159	8	4.3
	35-44	186	2	4.8
	45-54	97	2	1.5
	55-64	95	2	1.4
	65+	130	0	0.0
	Unknown/ Refused	1	0	0.0
	Total	754	32	3.7
Female	18-24	89	1	1.1
	25-34	181	6	2.4
	35-44	199	2	1.1
	45-54	117	0	0.0
	55-64	103	0	0.0
	65+	277	0	0.0
	Unknown/ Refused	8	0	0.0
	Total	974	9	0.9
Total (both sexes)	18-24	175	11	5.5
	25-34	340	14	3.3
	35-44	385	12	3.0
	45-54	214	2	0.7
	55-64	198	2	0.7
	65+	407	0	0.0
	Unknown/ Refused	9	0	0.0
	Total	1728	41	2.2

*Drinking and driving - Respondents who report having driven after having too much to drink, one or more times in the past month.

Data collected from the 1992 Behavioral Risk Factor Surveillance System, Bureau of Health Promotion, Iowa Department of Public Health.

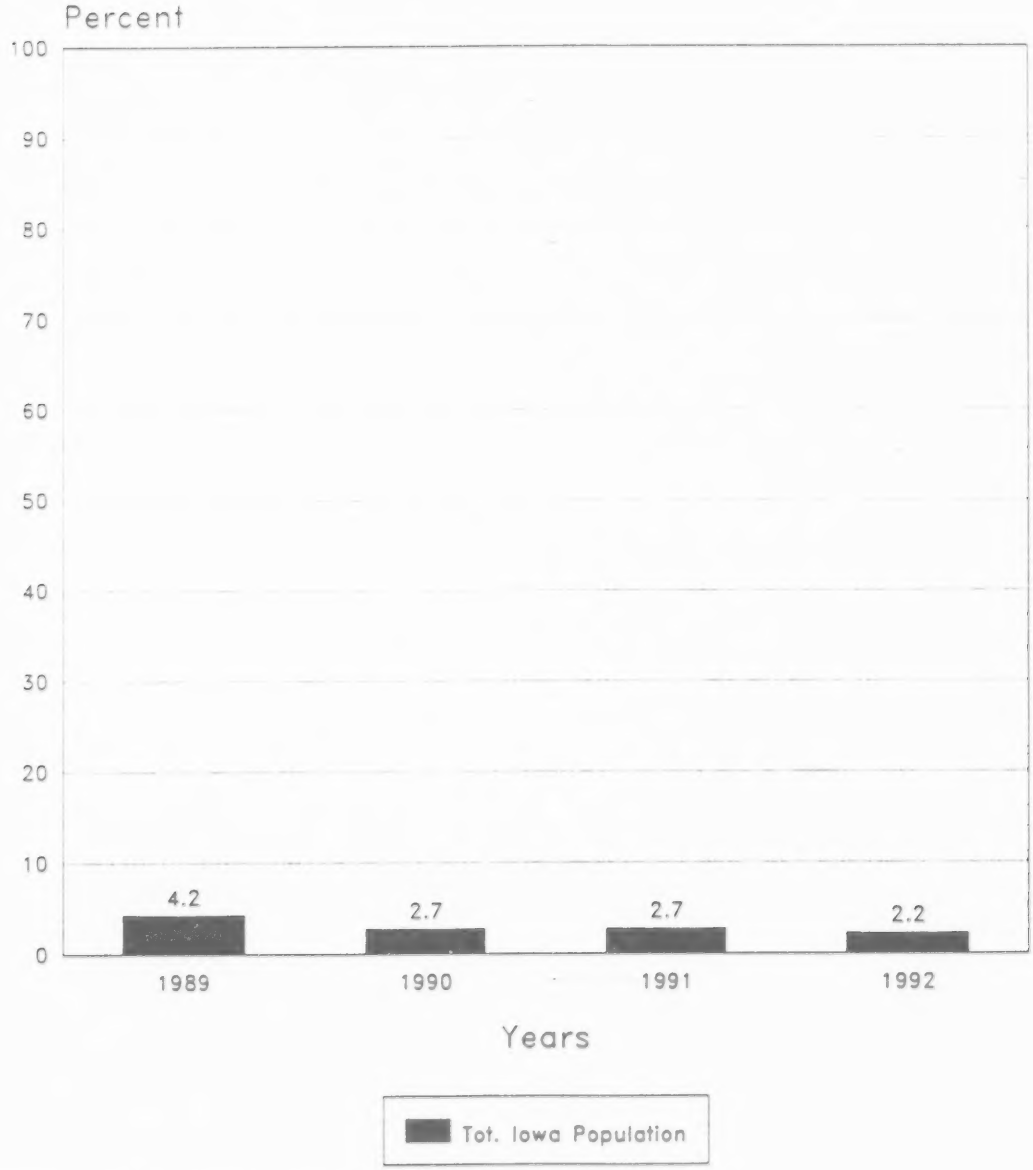
POPULATION AT RISK FOR DRINKING AND DRIVING BY AGE AND SEX, IOWA, 1992



Source: 1992 Behavioral Risk Factor Surveillance System, IDPH

Total sample size = 1728
Number at risk = 47

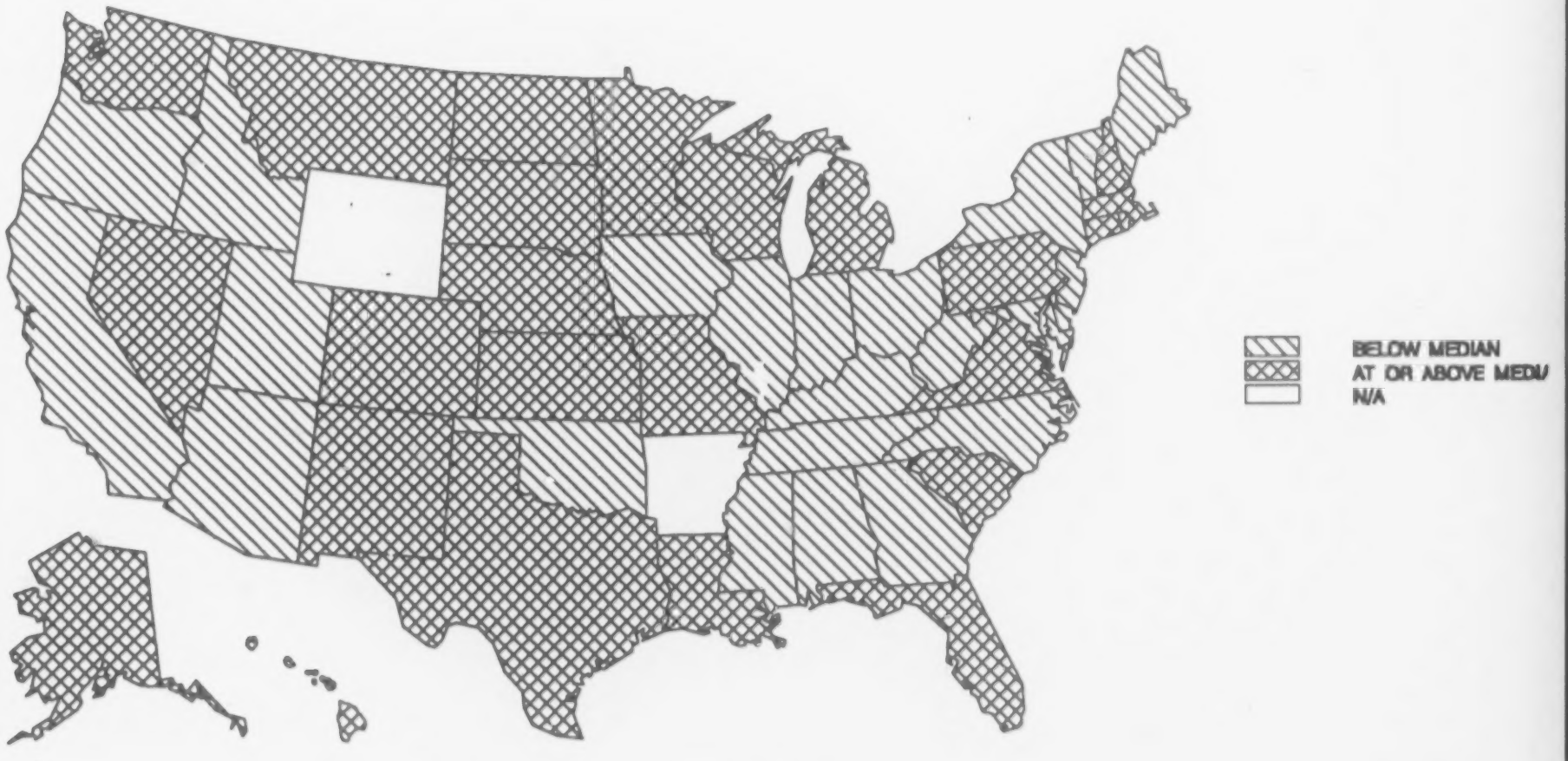
POPULATION DRINKING AND DRIVING 1989–1992



Source: 1989, 1990, 1991, 1992
BRFSS Summary Prevalence Report

1992 BRFSS PREVALENCE FOR DRINKING AND DRIVING

DRIVING AFTER HAVING TOO MUCH TO DRINK, ONE OR MORE TIMES



SEAT BELT USE

Background

In 1992 traffic fatalities accounted for 39,235 deaths nationwide[1] and 436 deaths in Iowa[2]. This represents a decline in deaths from years past. Former U.S. Transportation Secretary, Samuel Skinner, relates this to increased seat belt usage, heightened awareness of highway safety and our national fight against drunk driving[1].

States with mandatory seatbelt use laws have shown a reduced rate of deaths from motor vehicle crashes. In 1988, approximately 4500 lives were saved nationwide with a 45% seatbelt use rate. Of those lives, 3800 were in states that have mandatory laws[3].

Iowa's seat belt law requiring driver and front seat passenger to use seat belts went into effect July 1, 1986. In 1986 a document called "Life Toll" was created. Life Toll contains the names of people who have survived life-threatening crashes because they wore seat belts, according to law enforcement officials. A total of 1528 names have been added to Iowa's "Life Toll" since July 1, 1986[4].

To improve seatbelt usage, states need to (1) pass strong seatbelt laws, (2) provide public education of the seatbelt law, and (3) implement strict enforcement of the seatbelt law.

Seat Belt Use in Iowa

In 1992, 83.0% of Iowans reported wearing their seat belt "always or nearly always." Of the men 76.7% reported wearing their seat belt always or nearly always, and of the women 88.9% wore their seat belt with that frequency. Only 6.6% of Iowans reported "seldom" or "never" wearing their seat belt.

While these rates represent telephone surveys, actual observation studies show a much lower rate of seat belt usage. In 1992, a cooperative survey of the Department of Transportation and Iowa State Patrol observed 71% of Iowans used seat belts. Approximately 83% of the drivers observed on the interstate, 69% on primary roads, 71% on secondary roads, and 62% in cities and towns were wearing seat belts in 1989[5]. On the national level, more than 49,500 persons were convicted of not wearing their seat belts in 1989. Of those convicted, nearly 80% were under age of 35[3].

Comparison With Other States

Iowa had the 19th lowest rate of seat belt non-use out of the 49 states participating in the BRFSS. The median was 19.31 %, while Iowa has 16.7% of the population sometimes, seldom or never using safety belts in the front seat.

Year 2000 Health Objectives for the Nation

The Year 2000 Health Objective for seat belt use is to extend the seat belt use law to at least 45 states. Iowa has met this objective; the seatbelt law became effective in July 1986.

The other Year 2000 Objective for seat belt use is to increase the use of occupant protection systems to at least 85% of motor vehicle occupants. The BRFSS measures only adults while the Year 2000 Objectives covers all ages. For adult seatbelt usage, Iowa falls short of the 85% goal with a reported 83.5% usage rate.

BIBLIOGRAPHY FOR SEAT BELT USE

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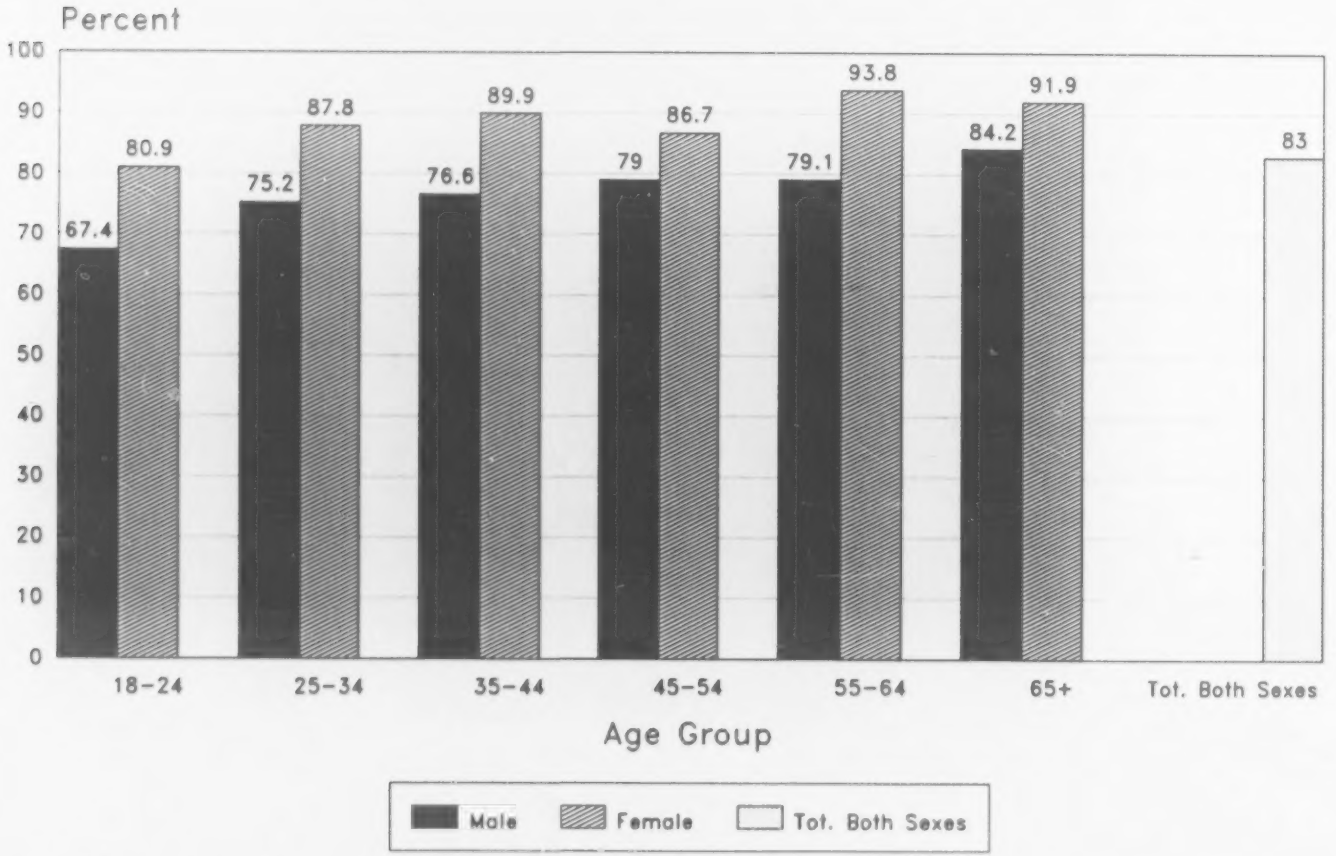
2. Iowa Department of Public Health: Iowa 1992 Vital Statistics. Des Moines, 1993.
3. U.S. Department of Health and Human Services: Healthy People 2000: National Health Promotion and Disease Prevention Objectives. Public Health Service, DHHS Publication No. (PHS) 91-50213, 1991.
4. Iowa Department of Transportation, Driver's Services Division. Des Moines, October 27, 1992.
5. Iowa Department of Transportation: Observational Safety Belt Usage Survey September 1992.

Population Always or Nearly Always Using Seatbelts by Age and Sex, Iowa, 1992

Sex	Age Group	Total Sample Size N	Always or Nearly Always n	Always or Nearly Always %
Male	18-24	86	57	67.4
	25-34	159	120	75.2
	35-44	186	139	76.6
	45-54	97	76	79.0
	55-64	95	75	79.1
	65+	130	109	84.2
	Unknown/ Refused	1	0	76.7
	Total	754	576	76.7
Female	18-24	89	72	80.9
	25-34	181	160	87.8
	35-44	199	177	89.9
	45-54	117	103	86.7
	55-64	103	96	93.8
	65+	277	252	91.9
	Unknown/ Refused	8	7	84.6
	Total	974	867	88.9
Total (both sexes)	18-24	175	129	74.2
	25-34	340	280	81.5
	35-44	385	316	82.8
	45-54	214	179	82.8
	55-64	198	171	86.9
	65+	407	361	88.9
	Unknown/ Refused	9	7	77.6
	Total	1728	1433	83.0

Data collected from the 1992 Behavioral Risk Factor Surveillance System, Bureau of Health Promotion, Iowa Department of Public Health.

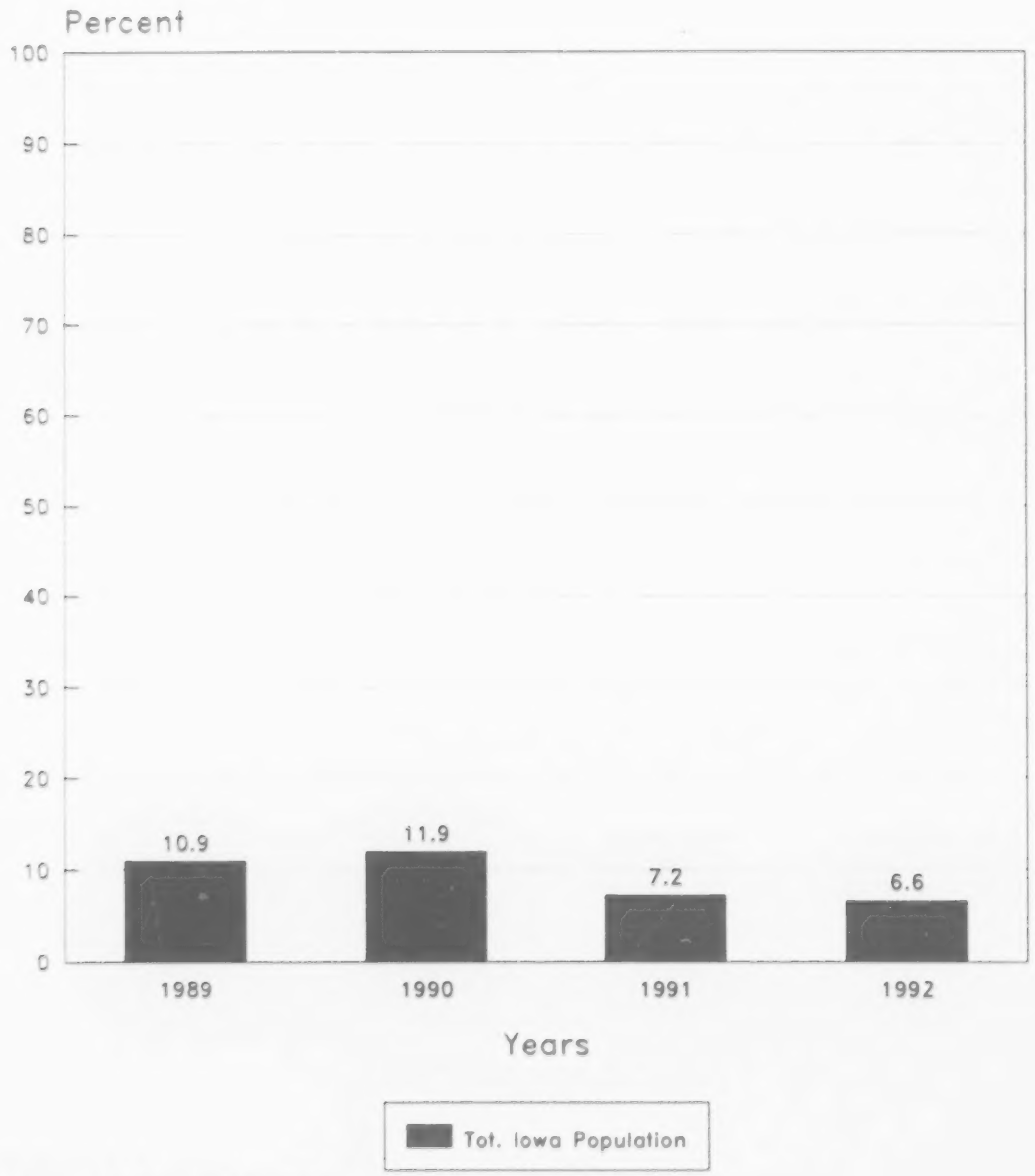
POPULATION ALWAYS OR NEARLY ALWAYS USING SEATBELTS BY AGE & SEX, IOWA, 1992



Source: 1992 Behavioral Risk Factor Surveillance System, IDPH

Total Sample Size = 1728
Number of users = 1443

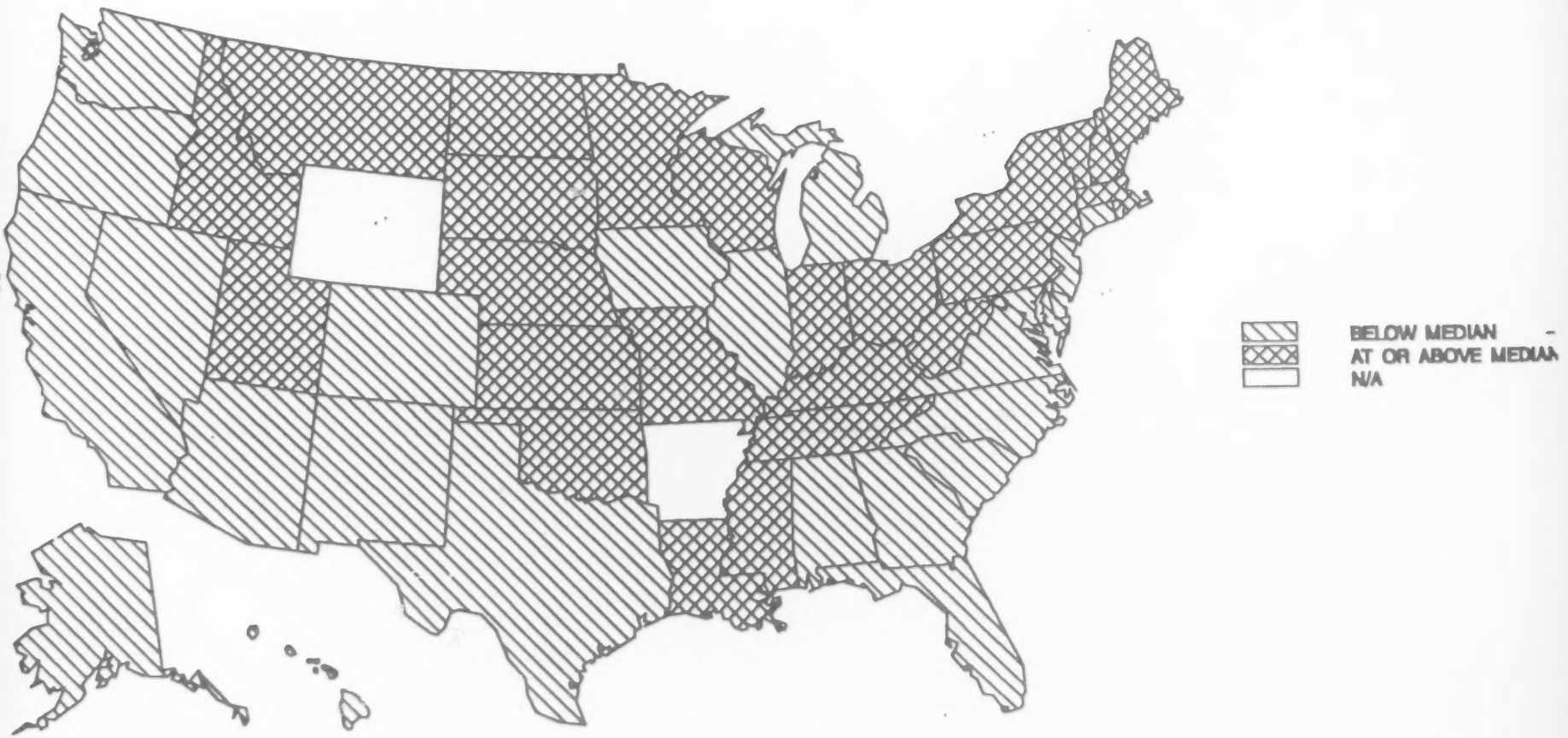
NON-USE OF SEATBELTS
1989-1992



Source: 1989, 1990, 1991, 1992
BRFSS Summary Prevalence Reports

1992 BRFSS PREVALENCE FOR LACK OF SAFETY BELT USAGE

SOMETIMES, SELDOM OR NEVER USE SAFETY BELTS



HIGH BLOOD CHOLESTEROL

Background

Blood cholesterol levels of 240 mg/dL or greater are associated with a higher incidence of coronary heart disease. Therefore, reducing the number of adults with high blood cholesterol ($\geq$240) will help decrease the risk of heart disease[1].

Average blood cholesterol levels in the United States have dropped significantly in the last 12 years. In addition, there has been a substantial reduction in the proportion of adults with high blood cholesterol. Between 1978 and 1990, the average cholesterol dropped from 213 mg/dL to 205 mg/dL. During the same time period, the proportion of adults with blood cholesterol levels $\geq$240 mg/dL fell from 26% to 20%. Almost half of all Americans (49%) have a blood cholesterol reading in the desirable range ($<$200 mg/dL)[2].

Despite the progress that has been made, half of the population in the United States have cholesterol levels at or above 200 mg/dL. Because of this, two kinds of approaches need to be taken to help lower blood cholesterol levels. One is a clinical approach that identifies individuals at high risk who need intensive intervention efforts. The second is a population strategy that seeks to reach all Americans by lowering the blood cholesterol levels of individuals and reducing the average cholesterol level throughout the population. When both approaches are used, the effects are complementary and represent a coordinated strategy for reducing coronary risk[3].

To help healthy Americans lower their blood cholesterol levels, the Population Panel of the National Cholesterol Education Program has developed a set of recommendations. Included in the recommendations are strategies to encourage all adults 20 years of age and older to have their blood cholesterol levels measured at least every 5 years and to help them adapt more healthful eating patterns. If the average blood cholesterol level in the U.S. population can be reduced approximately 10% or more, this will lead to an approximate reduction of 20% or more in deaths from coronary heart disease.

High Blood Cholesterol in Iowa

Of the survey respondents, 67.0% of adult Iowans reported having their blood cholesterol checked within the past five years. Of the Iowans who have had their blood cholesterol

checked, 27.3% reported it to be high ($\geq$ 240 mg%). Of the men who had their blood cholesterol checked, 24.5% reported a high blood cholesterol and of the women, 29.6% had a high blood cholesterol.

Comparison With Other States

In 1992, Iowa ranked 17th among the 49 states participating for adults having their blood cholesterol checked. Iowa had 66.96 % of the population checked for blood cholesterol levels while the median was 65.89 %.

Year 2000 Health Objectives For the Nation

The Year 2000 Health Objectives state that no more than 20% of adults aged 20 through 74 should have a blood cholesterol level of 240 mg% or greater. The 1992 BRFSS sample reported 18.4% of Iowans age 18 and older as having blood cholesterol levels greater than or equal to 240 mg%. Since 33% of Iowa's adult population has not had their blood cholesterol checked, it is not possible to state that Iowa has effectively met this objective.

Another Year 2000 Health Objective states that the proportion of adults age 18 and older who have had their blood cholesterol checked within the last five years should increase to at least 90%. The 1992 BRFSS sample showed 67.0% of Iowans have had their blood cholesterol checked within the past 5 years. This does not meet the Year 2000 Health Objectives. Of the respondents who have had their cholesterol checked, 80.3% had it checked within the past year.

The Year 2000 Health Objectives state that the proportion of adults 18 and older who can report their blood cholesterol level increase to 75%. The BRFSS sample showed that of Iowans who have had their blood cholesterol checked, 79.2% have been told their cholesterol level in numbers. This goal has been met.

BIBLIOGRAPHY FOR CHOLESTEROL

1. U.S. Department of Health and Human Service: Healthy People 200; National Health Promotion and Disease Prevention Objectives. Public Health Service, DHHS Publication No. (PHS) 91-50213, 1991.
2. Centers for Disease Control and Prevention, National Center for Health Statistics. Press Release, June 15, 1993.

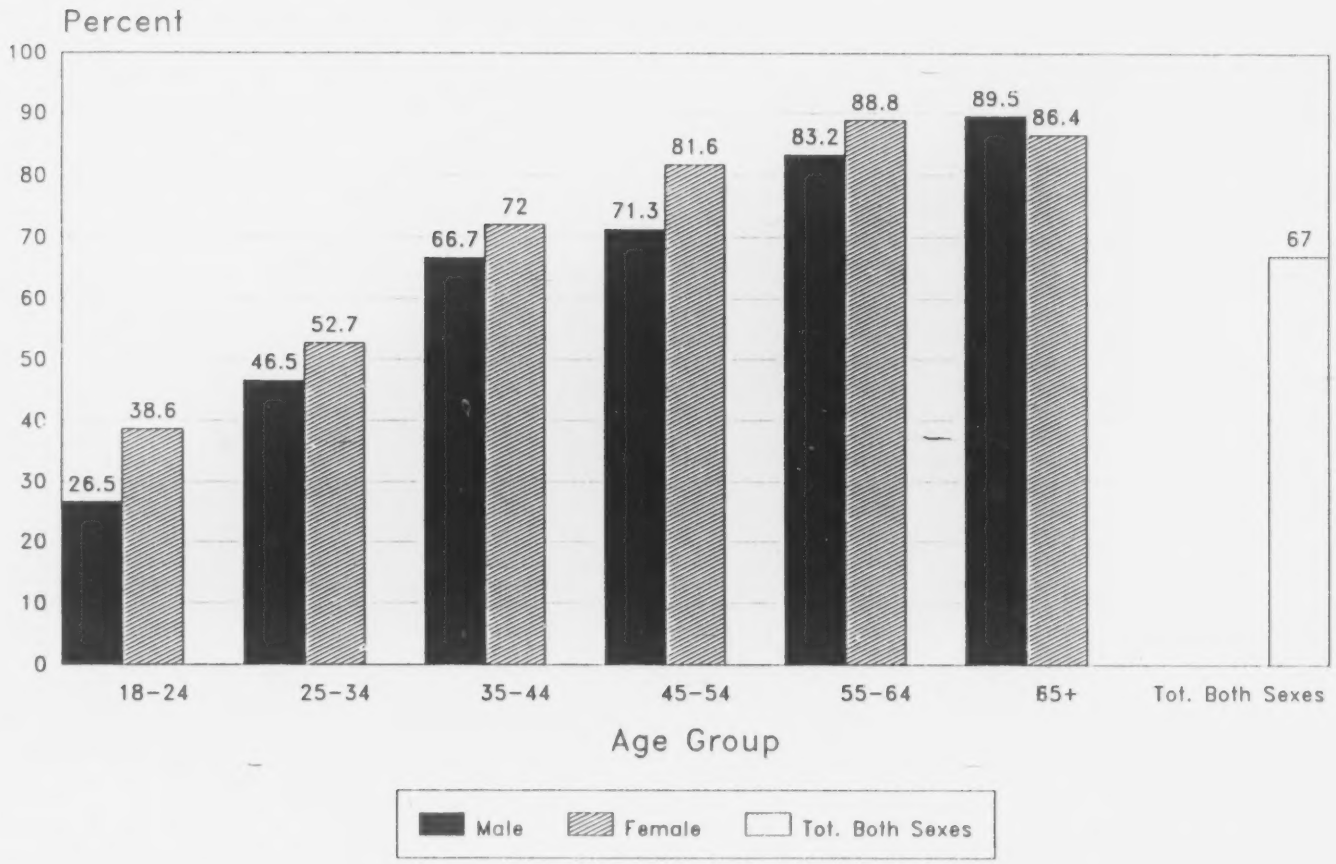
3. National Cholesterol Education Program: Second Report of the Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel II). Released Report, June 15, 1993.
4. National Cholesterol Education Program: Report of the Expert Panel on Population Strategies for Blood Cholesterol Reduction. Washington D.C.: U.S. Government Printing Office, NIH Publication No. 90-3046, November 1990

Population Having Had Blood Cholesterol Checked Within the Past 5 Years by Age and Sex, Iowa, 1992

Sex	Age Group	Total Sample Size N	Yes - Had Blood Cholesterol Checked n	%
Male	18-24	86	23	26.5
	25-34	159	72	46.5
	35-44	186	120	66.7
	45-54	97	69	71.3
	55-64	95	81	83.2
	65+	130	114	89.5
	Unknown/ Refused	1	0	0.0
	Total	754	713	62.9
Female	18-24	89	34	38.6
	25-34	181	98	52.7
	35-44	199	147	72.0
	45-54	117	98	81.6
	55-64	103	88	88.8
	65+	277	234	86.4
	Unknown/ Refused	8	8	100.0
	Total	974	707	70.6
Total (both sexes)	18-24	175	57	32.5
	25-34	340	170	49.6
	35-44	385	267	69.4
	45-54	214	167	76.4
	55-64	198	169	86.1
	65+	407	348	87.6
	Unknown/ Refused	9	8	91.7
	Total	1728	1186	67.0

Data collected from the 1992 Behavioral Risk Factor Surveillance System, Bureau of Health Promotion, Iowa Department of Public Health.

POPULATION HAVING HAD BLOOD CHOLESTEROL CHECKED BY AGE AND SEX, IOWA, 1992

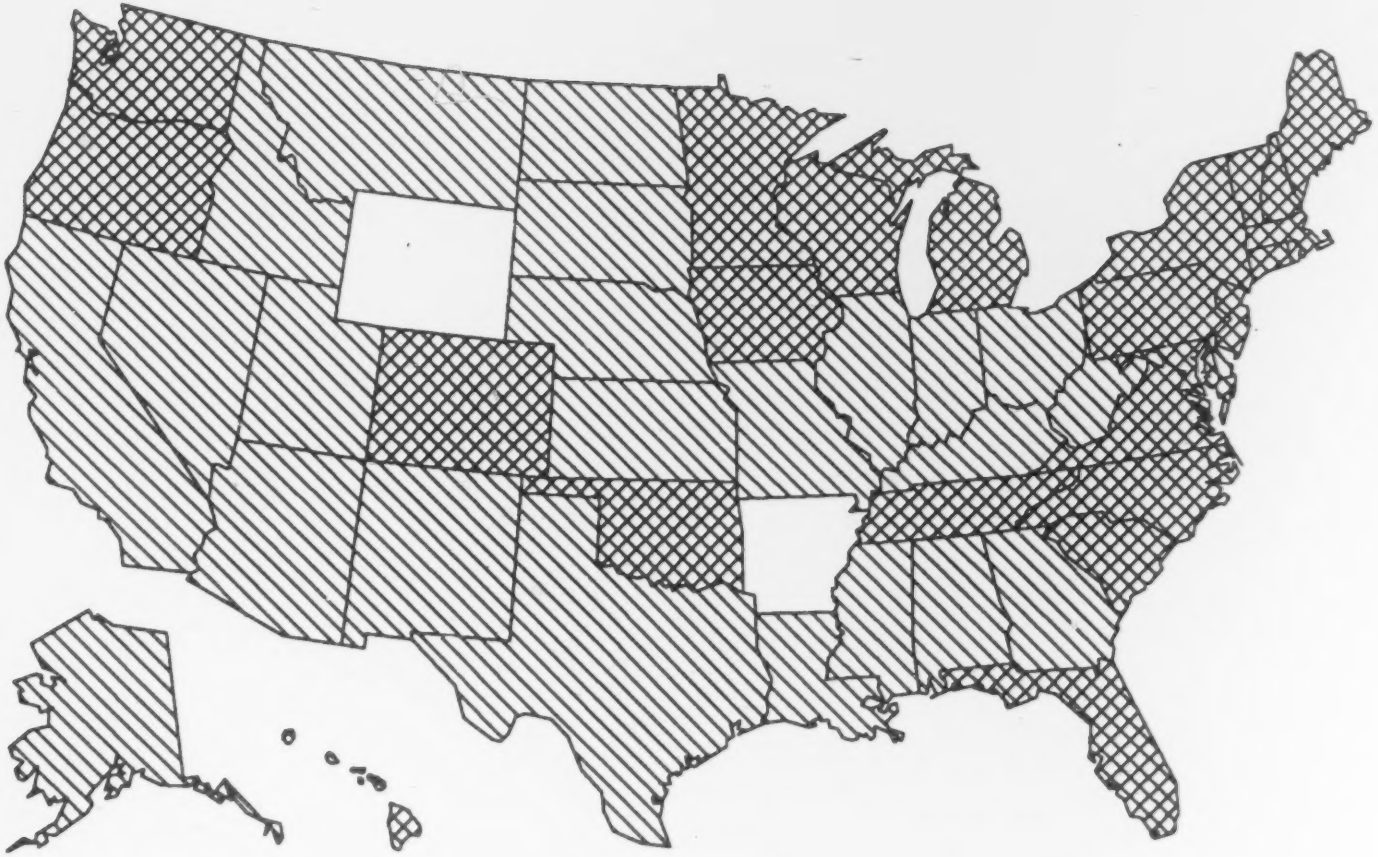


Source: 1992 Behavioral risk Factor Surveillance System, IDPH

Total sample size = 1728
Number Checked = 1186

1992 BRFSS PREVALENCE FOR CHOLESTEROL SCREENING

CHOLESTEROL CHECKED WITHIN THE PAST 5 YEARS



BELOW MEDIAN
AT OR ABOVE MEDI
N/A

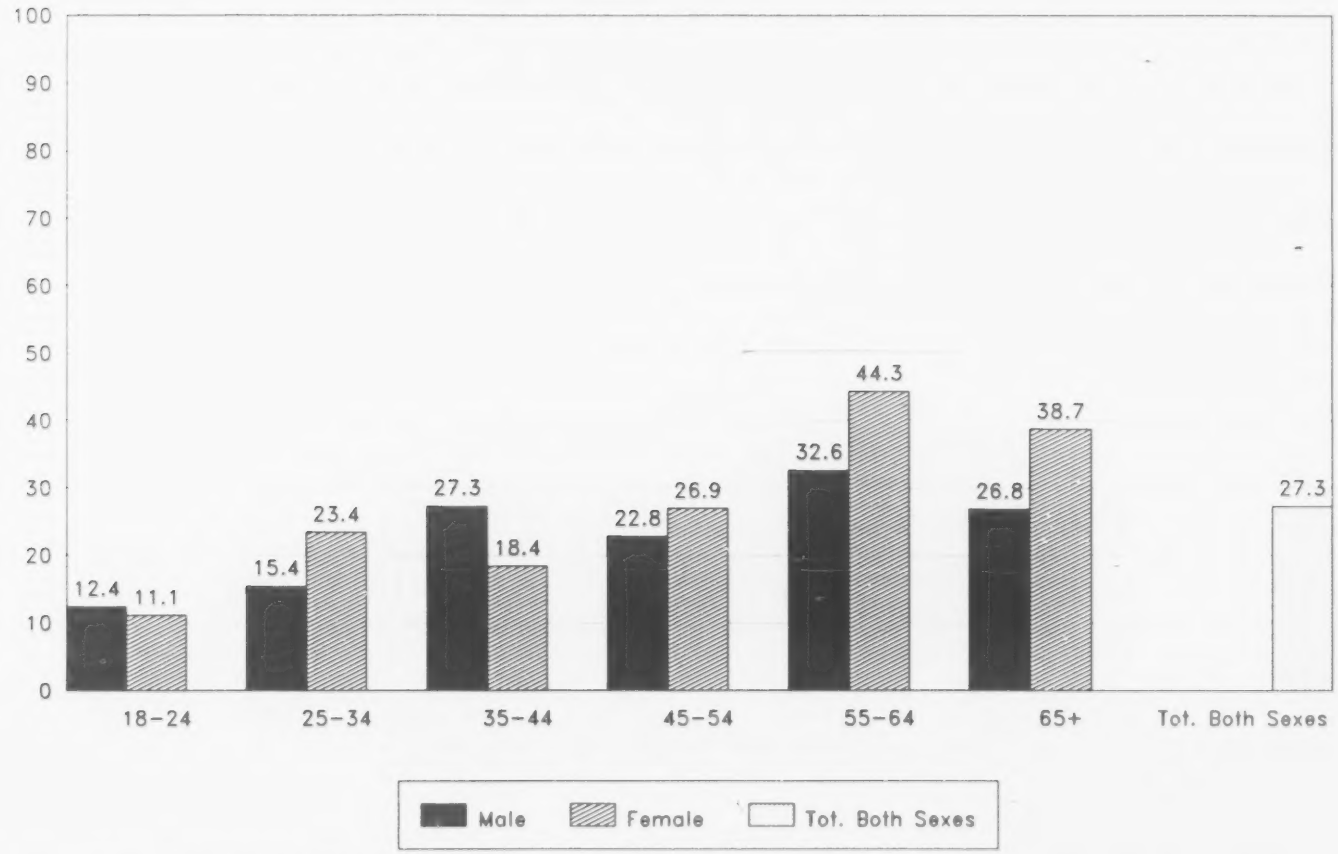
Population With High Blood Cholesterol* by Age and Sex, Iowa, 1992

Sex	Age Group	Total Sample Size N	Yes - Blood Cholesterol is High (>240 mg%) n	%
Male	18-24	23	3	12.4
	25-34	72	11	15.4
	35-44	120	31	27.3
	45-54	69	15	22.8
	55-64	81	25	32.6
	65+	114	33	26.8
	Unknown/ Refused	01	0	0.0
	Total	713	118	24.5
Female	18-24	34	4	11.1
	25-34	98	23	23.4
	35-44	147	25	18.4
	45-54	98	24	26.9
	55-64	88	37	44.3
	65+	234	87	38.7
	Unknown/ Refused	8	2	15.4
	Total	707	202	29.6
Total (both sexes)	18-24	57	7	11.6
	25-34	170	34	19.7
	35-44	267	56	22.7
	45-54	167	39	25.0
	55-64	169	62	38.9
	65+	348	120	33.9
	Unknown/ Refused	8	2	15.4
	Total	1186	320	27.3

*High Blood Cholesterol - Blood cholesterol level of 240 mg% or greater. Denominator is persons who have had their blood cholesterol checked.

Data collected from the 1992 Behavioral Risk Factor Surveillance System, Bureau of Health Promotion, Iowa Department of Public Health.

POPULATION WITH HIGH BLOOD CHOLESTEROL BY AGE AND SEX, IOWA, 1992

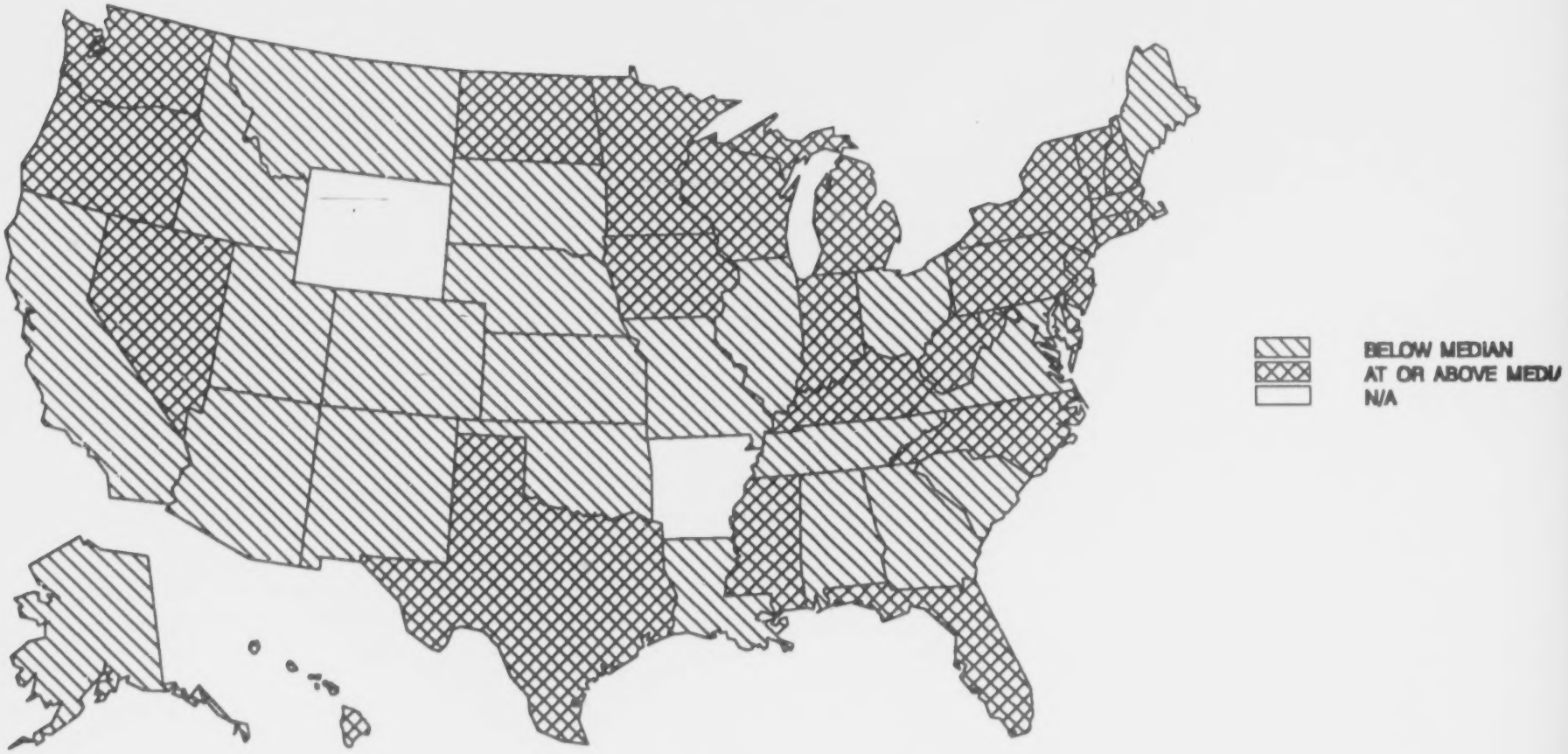


Source: 1992 Behavioral Risk Factor Surveillance System, IDPH

Number Checked = 1186

1992 BRFSS PREVALENCE FOR CHOLESTEROL AWARENESS

EVER TOLD CHOLESTEROL IS HIGH BY HEALTH PROFESSIONAL



HIGH BLOOD PRESSURE

Background

During the last two decades, the mortality rate from coronary heart disease has decreased about 50% and that from stroke has fallen by 57%[1]. Because high blood pressure is one of the major risk factors for coronary heart disease and the most important risk factor for cerebrovascular disease, it is reasonable to infer that progress in the reduction, treatment, and control of high blood pressure has contributed substantially to these improvements in mortality[2].

Despite the progress that has been made over the past 20 years, as many as 50 million Americans have elevated blood pressure (systolic blood pressure 140 mmHg or greater and/or diastolic blood pressure 90 mmHg or greater) or are taking antihypertensive medication[1]. Translated, this means one in every four Americans has high blood pressure. And in addition to being a risk factor for coronary heart disease and stroke, high blood pressure is also associated with an increased risk of developing congestive heart failure, renal insufficiency, and peripheral vascular disease[2].

The prevalence of high blood pressure increases with age, is greater for blacks than for whites, and in both races is greater in less educated than more educated people[1]. It is especially prevalent and devastating in lower socioeconomic groups. In young adulthood and early middle age, high blood pressure prevalence is greater for men than for women; thereafter, the reverse is true[1].

The goal of treating persons with hypertension is to prevent morbidity and mortality associated with high blood pressure and to control blood pressure by the least intrusive means possible. This can be accomplished by achieving and maintaining a blood pressure below 140/90 while concurrently controlling other modifiable cardiovascular risk factors[1]. Lifestyle modifications--which include weight reduction, increased physical activity, and moderation of dietary sodium and alcohol intake--are effective in reducing risks and lowering blood pressure.

Primary prevention of hypertension is a natural extension of hypertension treatment and can be accomplished through two complementary disease prevention approaches[2]. In the first approach--a population strategy--interventions to lower blood pressure are applied to the

general population with the objective of achieving a downward shift in the entire distribution of blood pressure[2]. To complement this approach, a targeted strategy can be used to lower blood pressure among populations that are most likely to develop the disease.

High Blood Pressure in Iowa

Definition:

Hypertension - Respondents who report they have ever been told their blood pressure is high ($\geq$ 140/90 mmHg).

In 1992, the prevalence of self-reported high blood pressure was 21.0% for Iowa. For males, the prevalence was 20.5%, while it was 21.3% for females. Of those reporting a high blood pressure, 69.8% have been prescribed medication. Further breakdown by sex shows that 66.4% of males who have ever been told they have high blood pressure and 72.7% of females who have ever been told they have high blood pressure have been prescribed medication.

It is important to keep in mind the limitations of interpreting self-reported data. Validity of the survey results depends on the accuracy of responses by the participants. In terms of hypertension, the participants must understand the definition of hypertension and must be followed by a health professional who is working with them to lower high blood pressure.

Comparison With Other States

In 1992, Iowa had the 19th highest prevalence of high blood pressure out of the 49 states conducting the BRFSS. The national median was 20.65% while Iowa reported 20.96% of the adult population having high blood pressure.

Year 2000 Health Objectives for the Nation

The Year 2000 Health Objectives for high blood pressure state that at least 90% of the people with high blood pressure should take action to help control (at or below 140/90) their blood pressure. In 1992, 69.8% of Iowans who reported having high blood pressure, reported they had been prescribed medicine to help control their blood pressure. This does not measure if medication was taken as prescribed or if diet and/or exercise were prescribed for blood pressure control. Therefore, no conclusions can be drawn to determine if 90% of Iowans are taking action to control blood pressure.

BIBLIOGRAPHY FOR HIGH BLOOD PRESSURE

1. National Heart. Lung and Blood Institute. The Fifth Report of the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure. NIH Publication No. 93-1088, January 1993.
2. National Heart, Lung, and Blood Institute. Working Group Report on Primary Prevention of Hypertension. NIH Publication No. 93-2669, May 1993.

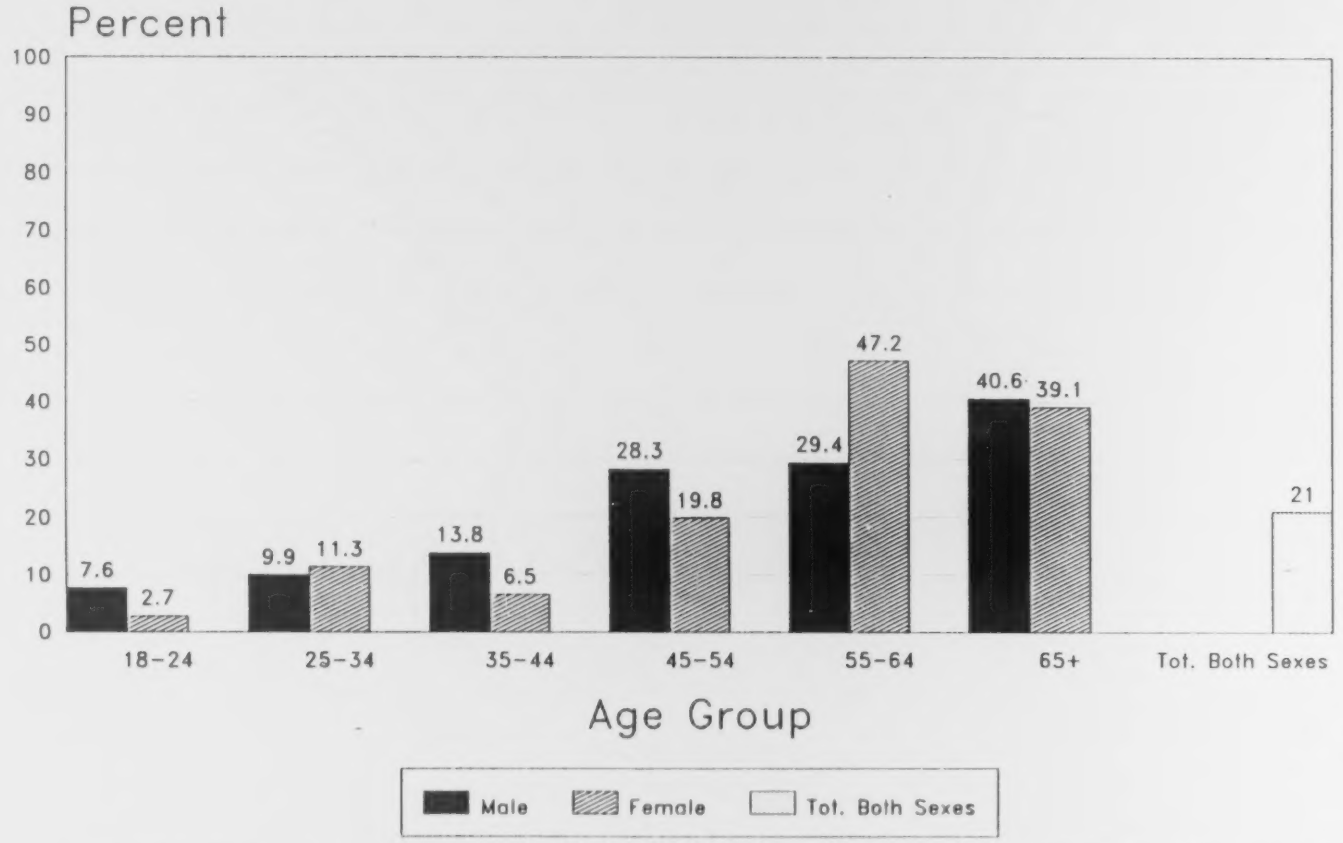
Population With Hypertension* by Age and Sex, Iowa, 1992

Sex	Age Group	Total Sample Size N	Population with Hypertension n	%
Male	18-24	86	5	7.6
	25-34	159	15	9.9
	35-44	186	27	13.8
	45-54	97	26	28.3
	55-64	95	29	29.4
	65+	130	51	40.6
	Unknown/ Refused	1	0	0.0
	Total	754	153	20.5
Female	18-24	89	3	2.7
	25-34	181	20	11.3
	35-44	199	15	6.5
	45-54	117	23	19.8
	55-64	103	42	47.2
	65+	277	106	39.1
	Unknown/ Refused	8	2	15.4
	Total	974	209	21.3
Total (both sexes)	18-24	175	8	5.2
	25-34	340	35	10.6
	35-44	385	42	10.2
	45-54	214	49	24.1
	55-64	198	71	38.7
	65+	407	157	39.7
	Unknown/ Refused	9	2	14.1
	Total	1728	364	21.0

*Hypertension - Respondents who report they have been told their blood pressure is high.

Data collected from the 1992 Behavioral Risk Factor Surveillance System, Bureau of Health Promotion, Iowa Department of Public Health.

POPULATION WITH HYPERTENSION BY AGE AND SEX, IOWA 1992

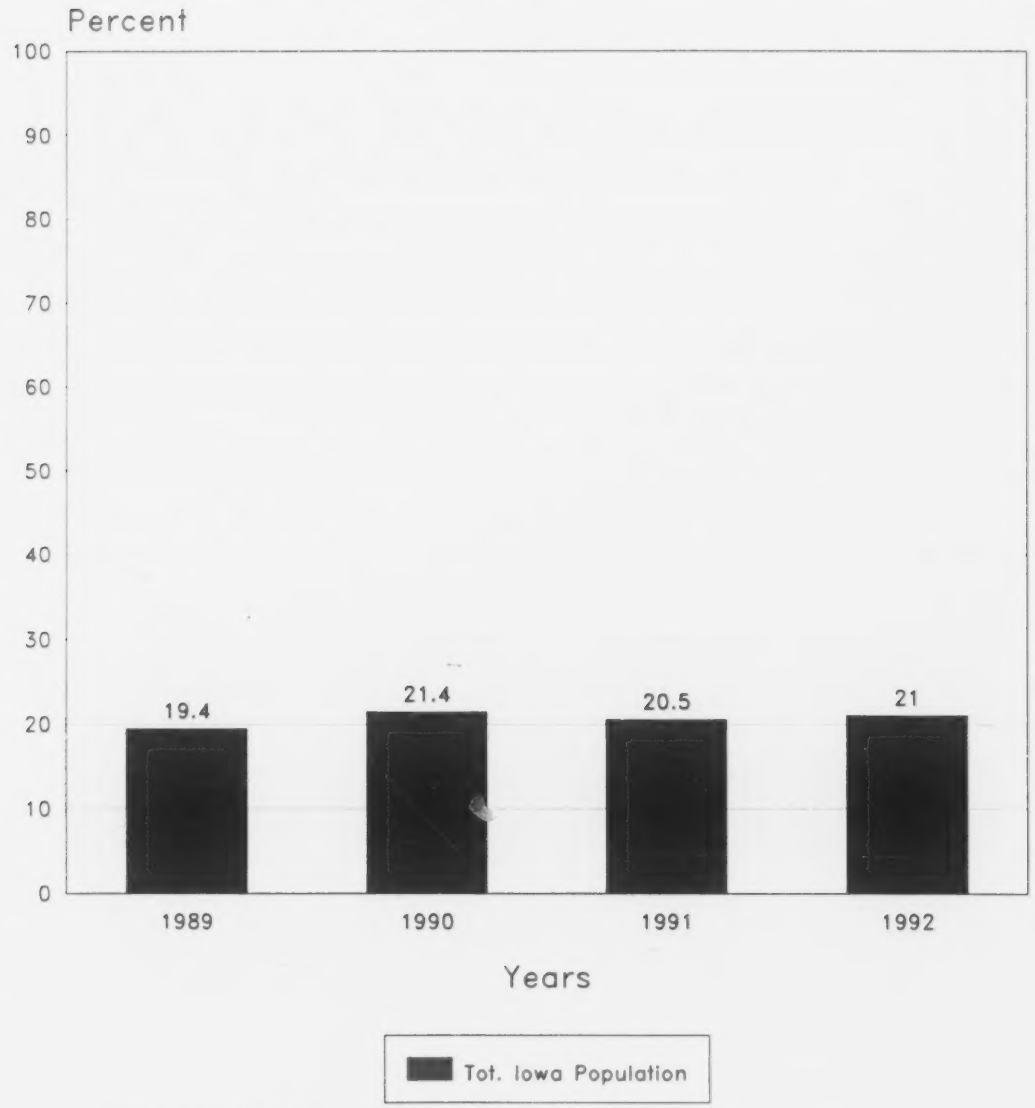


Source: 1992 Behavioral Risk Factor Surveillance System, IDPH

Total Sample Size = 1728

Number at Risk = 364

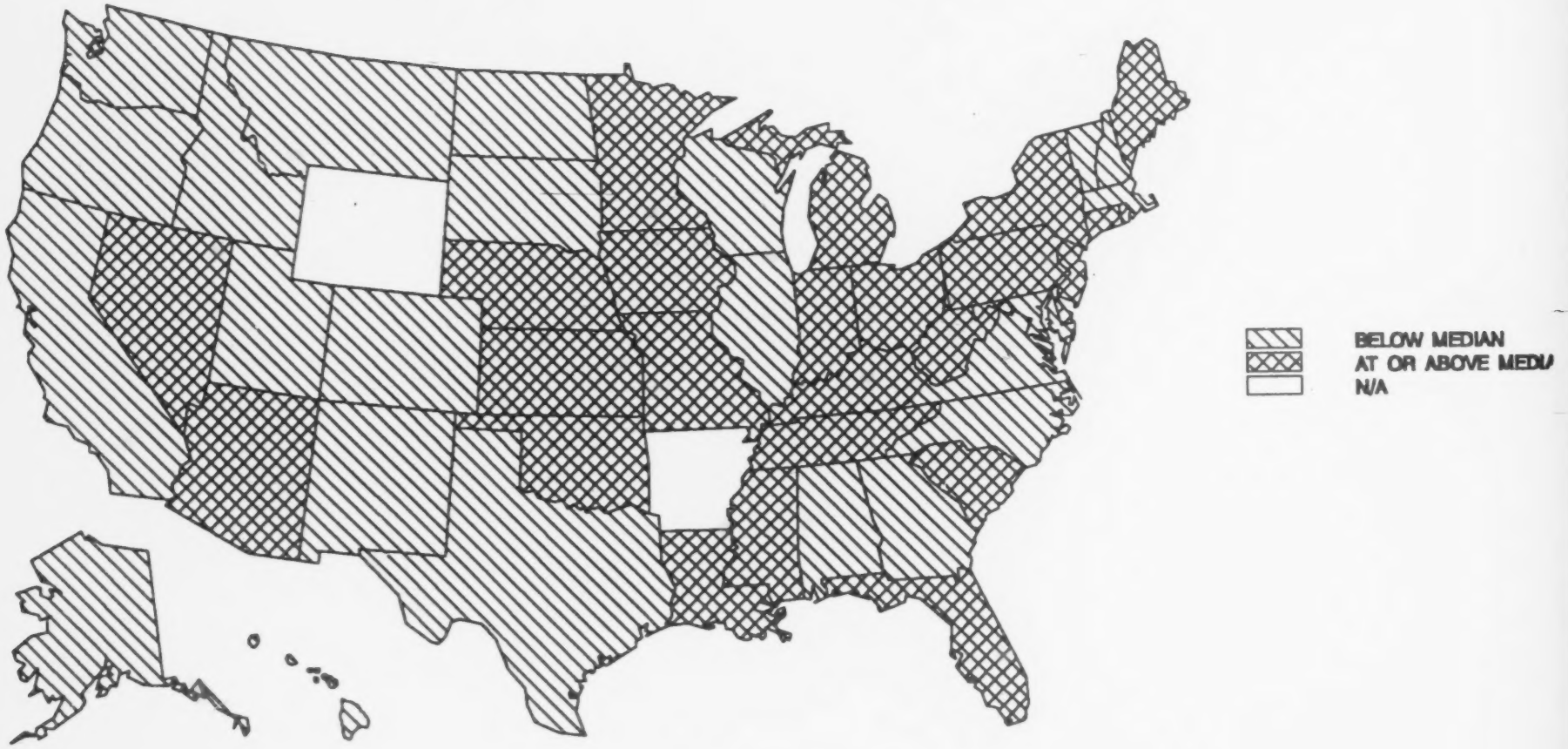
HYPERTENSION: POPULATION EVER TOLD BLOOD PRESSURE HIGH 1989–1992



Source: 1989,1990,1991,1992
BRFSS Summary Prevalence Reports

1992 BRFSS PREVALENCE FOR HYPERTENSION AWARENESS

EVER TOLD BLOOD PRESSURE HIGH (HYPERTENSION 2)



MAMMOGRAPHY

Background

It is estimated that in 1993, 182,000 new cases of breast cancer will be diagnosed and about 46,000 women will die from breast cancer[1]. Breast cancer is the second leading cause of cancer deaths in women after lung cancer. Approximately one in nine women will develop breast cancer.

The American Cancer Society (ACS) recommends monthly breast self-examination and a regular clinical breast exam for all women. In addition, they recommend a baseline mammogram for women aged 35-39 years of age. Asymptomatic women aged 40 to 49 should have mammograms every one to two years. Asymptomatic women 50 years of age and older are recommended to have a mammogram every year[2]. Symptomatic women of any age should follow the advice of their physician regarding examination and mammography. Through proper screening, including breast self-examination, clinical breast examination and mammography, breast cancer mortality may be decreased by 30%[3,4].

Despite the known advantage of early breast cancer detection from mammography, nationally only 36% of women aged 40 and older had ever received a clinical breast exam and mammography in 1987. Only 25% of women aged 50 and older reported having the screening procedure within the preceding two years[1].

The two reasons women cite most often for not having a mammogram is that they did not know they needed it and that their doctor did not recommend it[5]. Barriers mentioned by physicians for recommending mammograms include high cost, belief the examination is unnecessary and concern about the risk of radiation exposure[6].

Mammography in Iowa

In 1992, 52.2% of women age 18 or older that were surveyed reported they have had a mammogram at some time. Of Iowa women age 40 and older, 73.5% have had a mammogram with 67.0% of those being done in the past year. The most common reason for having a mammogram was that it was done as part of a routine checkup (87.7%), and the second most common reason cited is due to a breast problem (10.3%).

Comparison With Other States

Among the 49 states participating in the BRFSS, Iowa ranked 10th in the percentage of women having a mammogram. The national median was 50.15%, while Iowa reports 52.23% of adult women having had a mammogram.

Year 2000 Health Objectives for the Nation

The Year 2000 Health Objective states that the proportion of women age 40 and older who have had a clinical breast exam and a mammogram increase to at least 80%. The 1992 Iowa BRFSS sample reports 73.5% of women age 40 and older have had a mammogram, therefore, Iowa has not met the Year 2000 Health Objective.

Another Year 2000 Health Objectives state that the proportion of women age 50 and older who have had a clinical breast exam and a mammogram within the preceding one to two years increase to at least 60%. The 1992 BRFSS sample reports 56.9% of women age 50 and older have had a mammogram within the past year or two. This does not meet the Year 2000 Objectives.

BIBLIOGRAPHY FOR MAMMOGRAPHY

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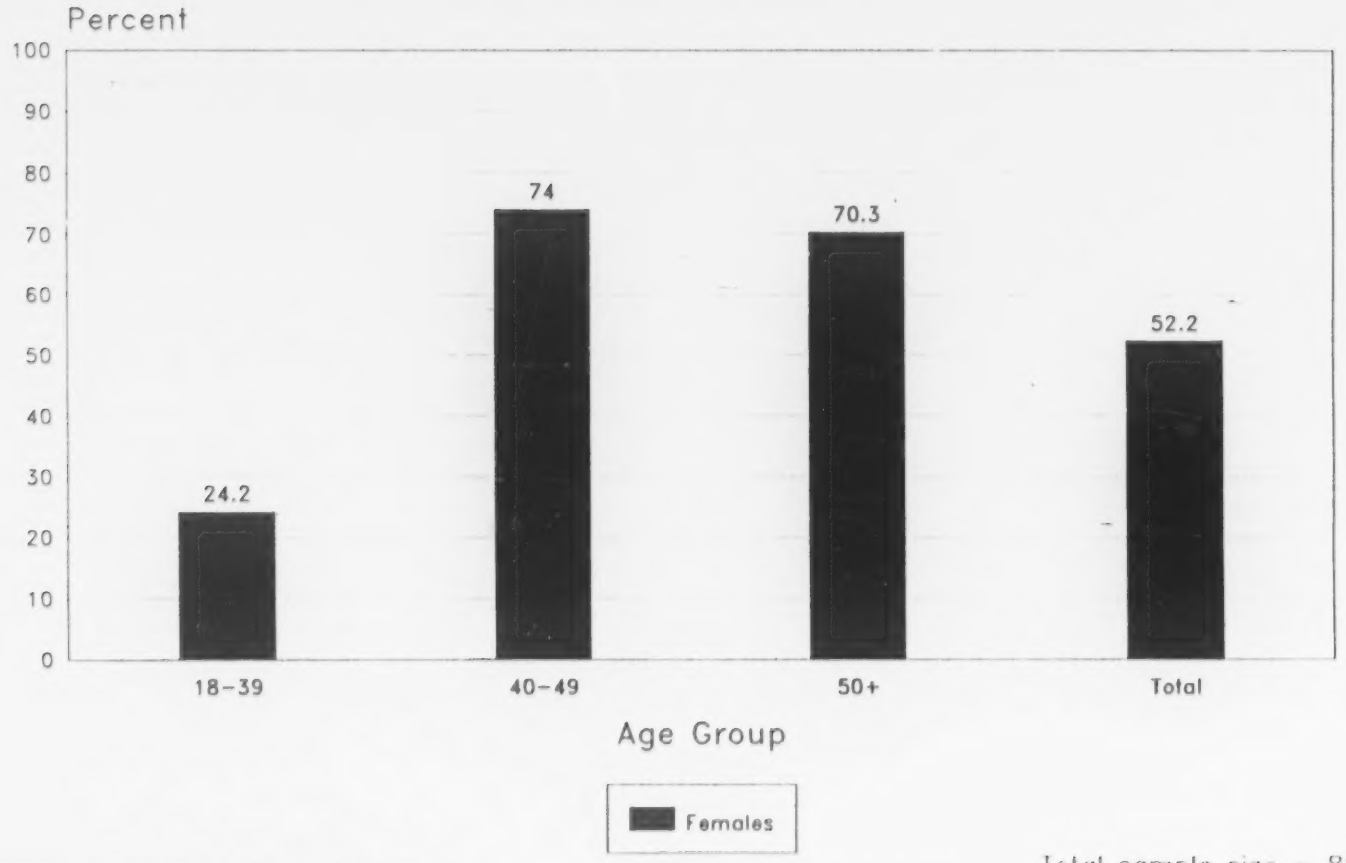
3. Collete HJA, Day NE, Rambach JJ et al: Evaluation of screening for breast cancer in a non-randomized study (the DOM Project) by means of a case-controlled study: Lancet 1: 1224-1226, 2 June, 1984.
4. Verbeek, ALM, Hendrik JHCL, Peeters PHM et al: Mammographic breast pattern and the risk of breast cancer. Lancet (March 17) 1: 591-593,1984.
5. National Cancer Institute Breast Cancer Consortium. Screening Mammography: A Missed Clinical Opportunity? Journal of the American Medical Association 264:54-58, 1990.
6. American Cancer Society. Survey of Physicians' Attitudes and Practices in Early Cancer Detection. CA - A Cancer Journal for Clinicians 35:197-213, 1985.

Female Population Having Had a Mammogram by Age, Iowa, 1992

Sex	Age Group	Total Sample Size N	Yes n	Yes %
Female	18-39	380	99	24.2
	40-49	149	111	74.0
	50+	437	307	70.3
	Unknown/ Refused	8	4	50.0
	Total	974	521	52.2

Data collected from the 1992 Behavioral Risk Factor Surveillance System, Bureau of Health Promotion, Iowa Department of Public Health.

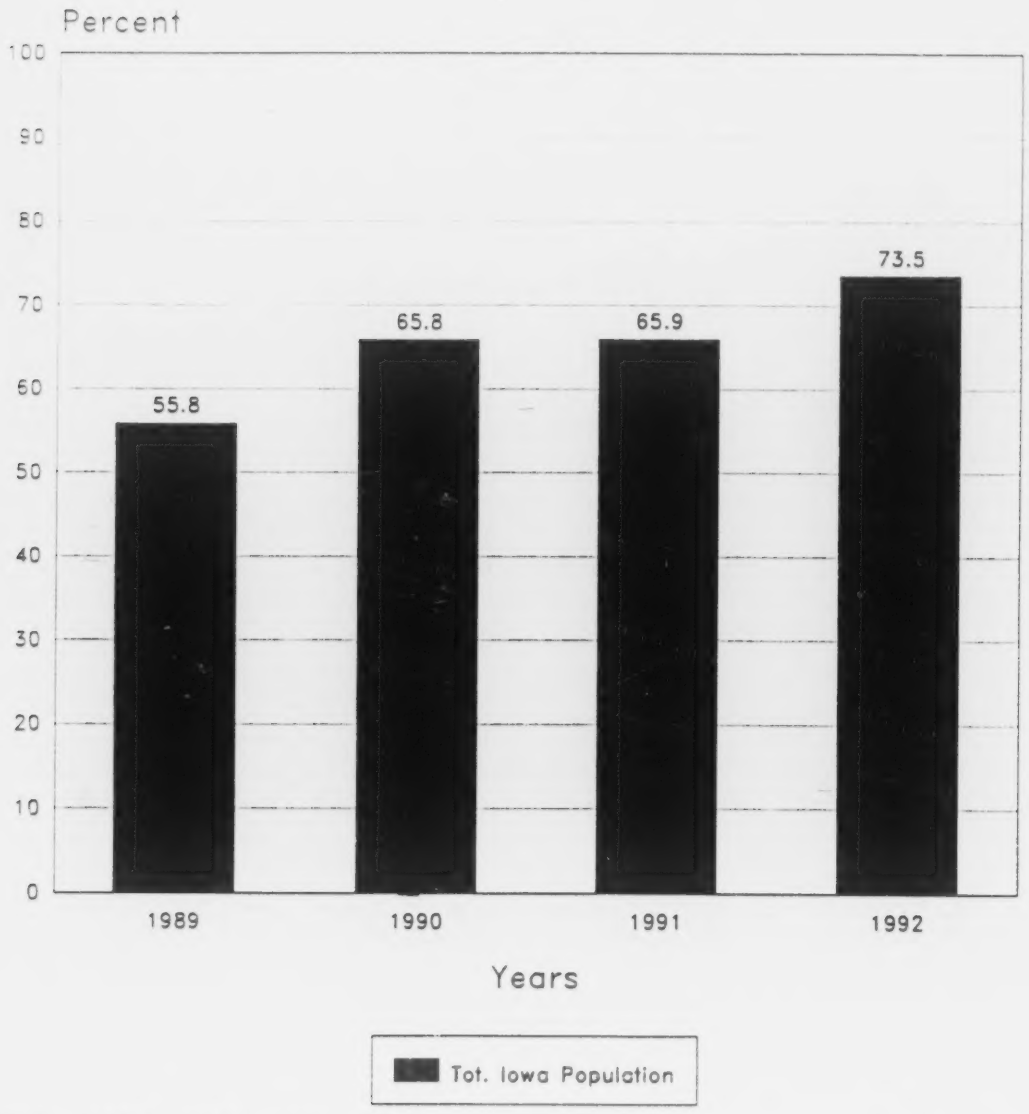
FEMALE POPULATION HAVING HAD A MAMMOGRAM BY AGE, IOWA, 1992



Source: 1992 Behavioral Risk Factor Surveillance System, IDPH

Total sample size = 856
Number having had a mammogram = 521

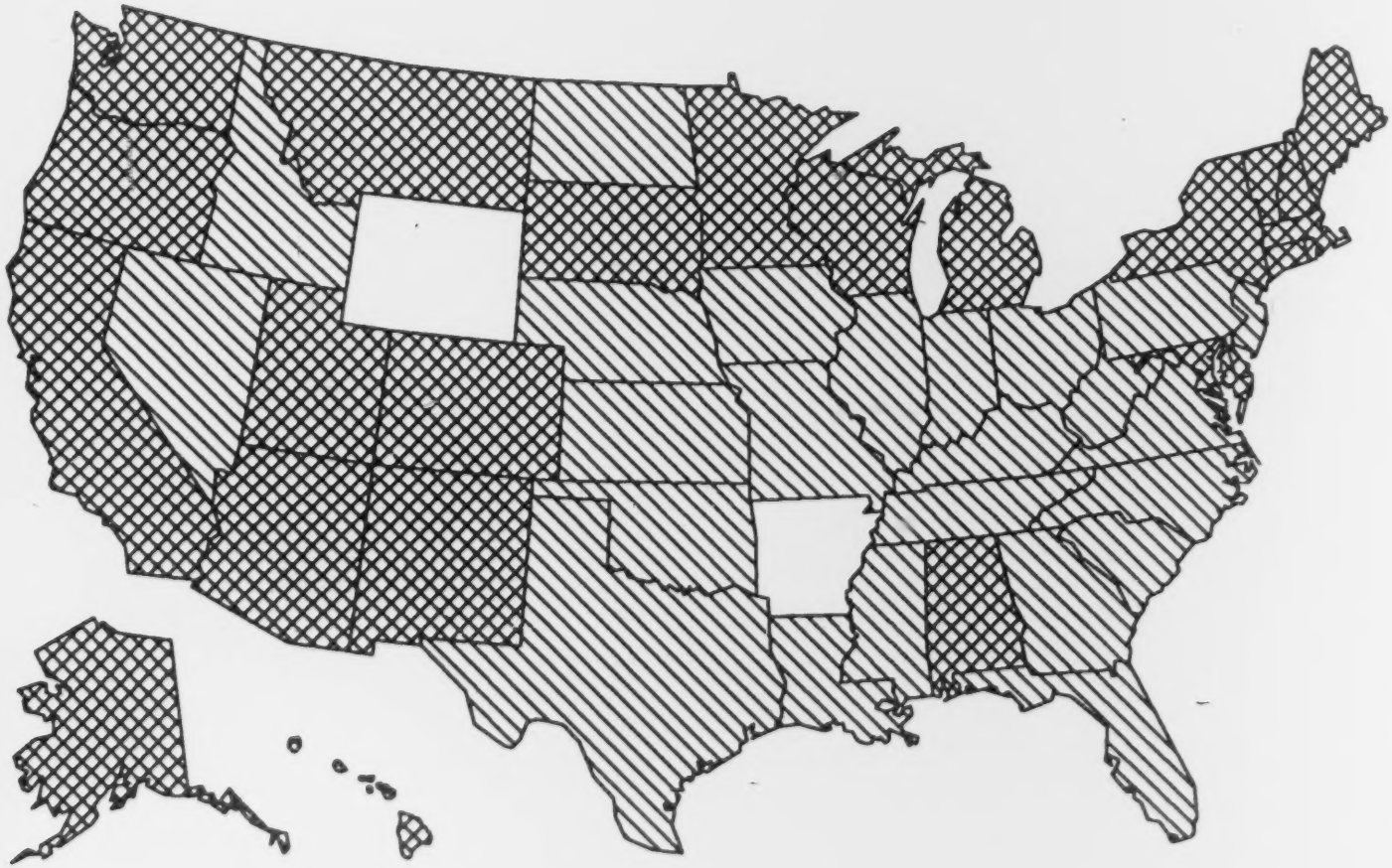
WOMEN OVER AGE 40 WHO HAVE HAD A MAMMOGRAM 1989–1992



Source: 1989, 1990, 1991, 1992
BRFSS Prevalence Report

1992 BRFSS PREVALENCE FOR MAMMOGRAM – FEMALES

EVER HAD A MAMMOGRAM, AGE 40 AND OLDER



BELOW MEDIAN
AT OR ABOVE MED
N/A

PAP SMEARS

Background

Approximately 13,000 new cases of cervical cancer are diagnosed each year, and about 7,000 women die of this disease annually[1]. Although 90 percent of women with localized cervical cancer are still alive after five years, only about 40 percent are alive of those diagnosed with advanced disease[2]. Although all sexually active women are at risk for cervical cancer, the disease is more common among women of low socioeconomic status and those with a history of multiple sexual partners or early onset of sexual intercourse[3,4,5].

The principal screening test for cervical cancer is the Pap smear. Evidence suggests that early detection through routine Pap testing can dramatically lower the incidence of invasive disease[6-9] and nearly eliminate deaths from cervical cancer. The effectiveness of cervical cancer screening increases when Pap testing is performed more frequently[7]. The American Cancer Society recommends annual Pap tests starting at age 18 or with sexual activity, and less frequent exams after three consecutive normal exams at the discretion of the physician.

Pap Smears in Iowa

In 1992, 91.1% of women age 18 or older that were surveyed reported they have had a Pap smear at some time. Of women respondents who have not had a hysterectomy, 76.8% reported they had a Pap smear in the last two years.

Comparison With Other States

In 1992, Iowa ranked the 6th lowest in the nation for the amount of women reporting they had ever had a Pap smear. The median was 93.1%, while Iowa reported 91.1% women over the age of 18 had ever had a Pap smear.

Year 2000 Health Objectives for the Nation

The Year 2000 Health Objective state that the proportion of women over the age of 18 with an intact uterine cervix (have not had a hysterectomy) who have ever had a Pap smear increase to at least 95%. The 1992 Iowa BRFSS sample reports 90.6% of women over the age of 18 and having an intact uterine cervix had ever had a Pap smear; therefore the Year 2000 Health Objective has not been met.

The second Year 2000 Health Objective for Pap smears states that the proportion of women over 18 with an intact uterine cervix who have had a Pap smear in the last two years increase to at least 85%. The 1992 Iowa BRFSS sample reports that 76.8% of the above group have had a Pap smear in the last two years, not meeting the Year 2000 Health Objective.

The third Year 2000 Health Objective on Pap smears states that women over the age of 70 with an intact uterine cervix who have had a Pap smear in the last two years increase to at least 70%. The 1992 Iowa BRFSS sample reports 59.9% of women over the age of 70 and having an intact uterine cervix had a Pap smear in the last two years, therefore not meeting the Year 2000 Health Objective.

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2. Shun-Zhang Y, Miller AB, Sherman GJ: Optimizing the age, number of tests, and test interval for cervical cancer screening in Canada, J Epidemiol Community Health 36, 1-10, 1982.
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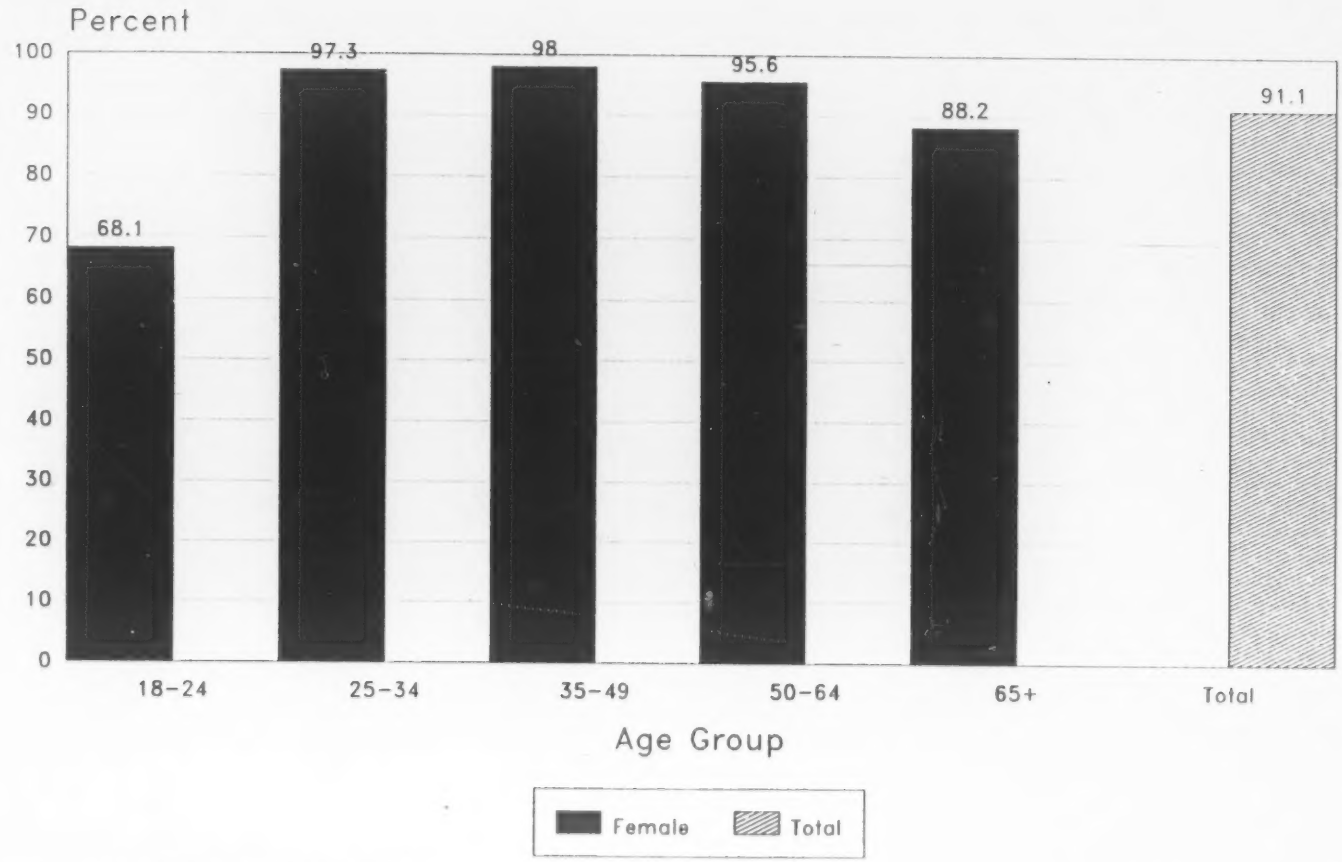
FEMALE POPULATION WHO HAVE EVER HAD A PAP SMEAR BY AGE, IOWA 1992

Sex	Age Group	Total Sample Size N	Yes N	Yes %
Female	18-24	89	61	68.1
	25-34	181	175	97.3
	35-49	259	255	98.0
	50-64	160	155	95.6
	65+	277	241	88.2
	Unknown/ Ref	8	7	84.6
Total		974	894	91.1

Data collected from the 1992 Behavioral Risk Factor Surveillance System, Bureau of Health Promotion, Iowa Department of Public Health

FEMALE POPULATION HAVING HAD A PAP SMEAR BY AGE, IOWA, 1992

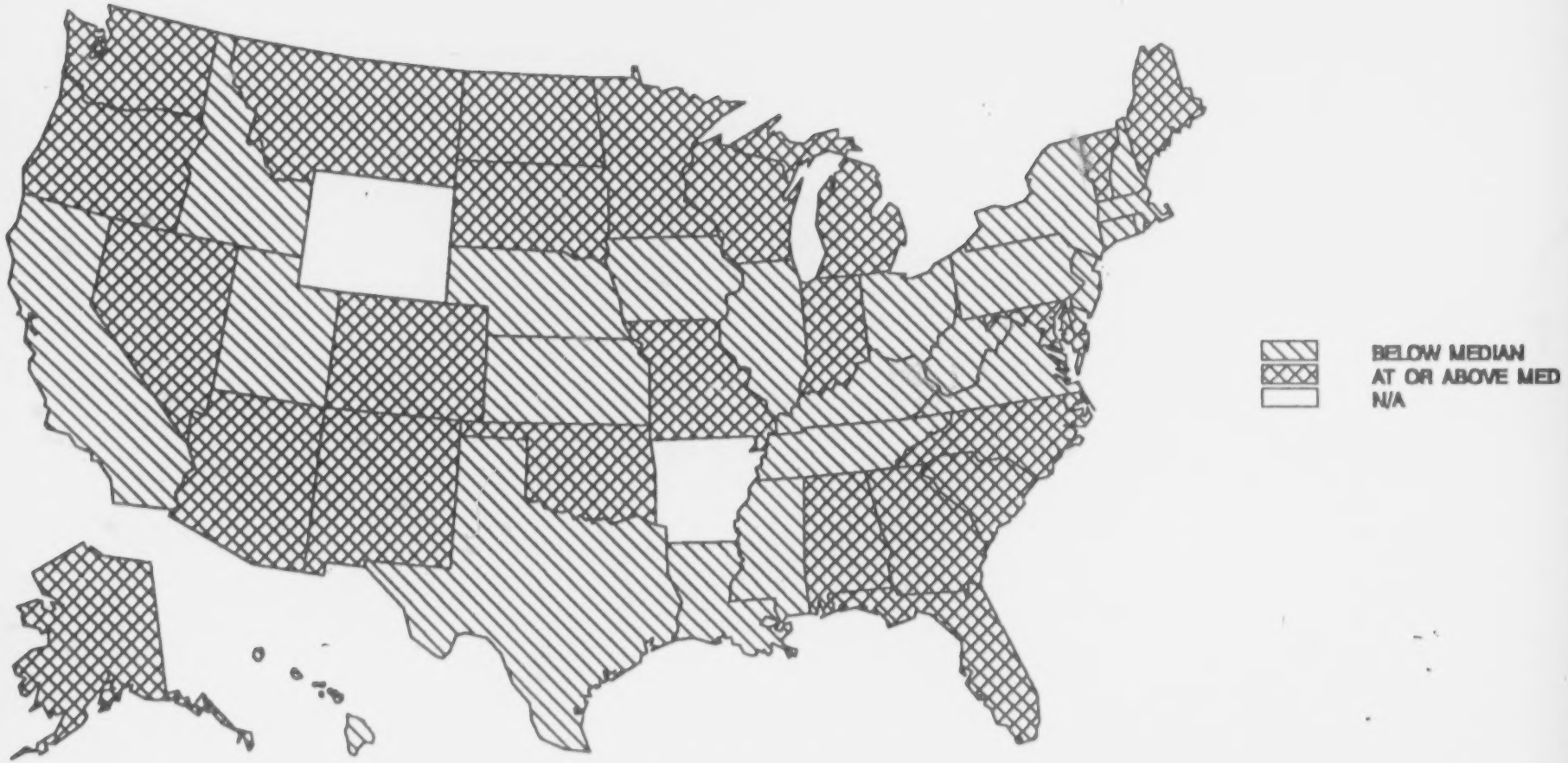


Source: 1992 Behavior Risk Factor Surveillance System, IDPH

Total Sample Size = 974
Number Had Pap Smear = 894

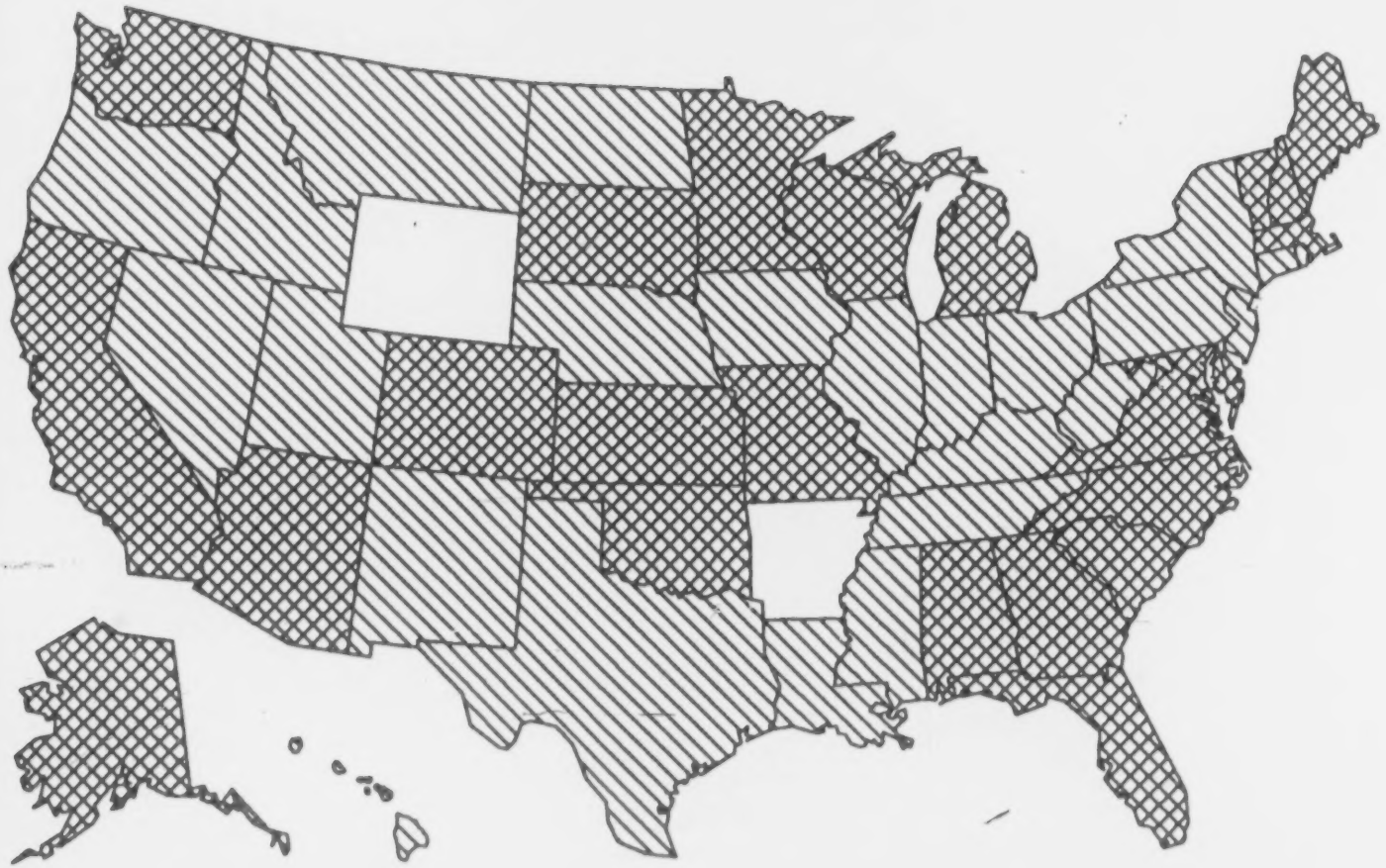
1992 BRFSS PREVALENCE FOR PAP SMEAR

EVER HAD A PAP SMEAR



1992 BRFSS PREVALENCE FOR LAST PAP SMEAR

LAST PAP SMEAR WITHIN LAST 2 YEARS, AGE 18 AND OLDER



BELOW MEDIAN
AT OR ABOVE MED
N/A

AIDS

Background

The human immunodeficiency virus (HIV) attacks cells in the immune system. Within 10 years of infection with HIV, over 50% of the people will develop acquired immunodeficiency syndrome (AIDS) and another 40% will develop other clinical illnesses associated with HIV[1].

An estimated one million people are infected with HIV and more than 315,390 cases of AIDS have been reported in the United States[2]. Currently, there is no cure for AIDS; however, antimicrobial drugs can extend survival. A vaccine is in early stages of research and development. AIDS has become the sixth leading cause of years of potential life lost in the United States[3].

AIDS will continue to make major demands on the health care and the social service systems for many years to come. Estimated annual costs of treating a person with AIDS is $38,300, treating a person with HIV, $10,000; and the life time cost of treating a person with AIDS from diagnosis until death is $102,000. Treatment cost for all persons in the United States with HIV, including those diagnosed with AIDS, will reach $15.2 billion by 1995.

Intervention strategies to help overcome the devastation of AIDS include 1) public education of all people to adopt low or no risk behaviors; 2) prevention programs developed at the community level with emphasis on high risk groups; 3) increase the number of people receiving HIV counseling and testing, and 4) limit or eliminate the discrimination of HIV infected people in employment, housing, schools and medical services.

AIDS in Iowa

The AIDS section of the 1992 BRFSS refers to attitudes, not health behaviors as in the other sections of this report.

There are currently 585 (386 in 1992) reported cases of AIDS in Iowa as of September 30, 1993[5]. According to the BRFSS, 97.6% of Iowans have heard of the AIDS virus called HIV. When asked if they were aware of drugs available to lengthen the life of a person infected with AIDS, 50.5% said yes. Of the respondents, 37.2% of adult Iowans felt that you could get AIDS by giving blood, 55.5% said you could not get AIDS by giving blood and 7.3% did not know. When adults who had children in kindergarten through eighth grade were asked if they

would allow their child to be in the same classroom with a child infected with AIDS, 76.1% said yes, 5.3% said no and 18.6% were undecided or refused to answer. The largest percentage of Iowans (44.7%) said they would go to private doctor or health maintenance organization to be tested for the AIDS virus. The second most common site given for AIDS testing was a hospital or emergency room (34.2%). Only 4.2% of Iowans report they would go to the state health department to receive a test for AIDS. Sixty-one percent of Iowans reported that a condom was somewhat effective in preventing transmission of the AIDS virus through sexual activity, 18.6% reported it to be very effective, 12.3% did not know how effective it would be, 7.0% said it would not be effective at all, 0.6% refused to answer and 0.5% did not know the method of condom use.

Comparison With Other States

Iowa ranks 31st out of the 49 states for the belief that drugs are available to lengthen life for people with AIDS. Iowa has a prevalence of 50.47% for belief in drugs available for those with AIDS, with the national median at 54.33%.

Only 18.6 percent of Iowans report that a condom is very effective for prevention of AIDS. Iowa ranks the 4th lowest in the nation for this question. The median for the nation was 32.15%.

Year 2000 Health Objectives for the Nation

The Year 2000 Health Objectives for the nation related to AIDS address health behaviors, whereas the 1992 BRFSS questions pertain to attitudes, preventing any comparability.

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HEALTH INSURANCE COVERAGE AND ACCESS TO HEALTH CARE

Background

Despite recent federal initiatives that have expanded health insurance coverage for low-income children, the number of Americans without health insurance remains high, at more than 35 million people in 1990. In addition, rapidly increasing health care costs are having large impacts on employers providing coverage to workers, on state and federal governments funding public insurance, and on individuals buying private policies. Increases in health care costs have led to recent declines in employment-based coverage and to some employers scaling back the extent of their coverage. Federal and state governments already confronted with budget problems must find funds to provide public insurance to the poor and elderly. The private sector, the public sector, and individuals all bear the cost of providing uncompensated care to individuals without health insurance.

About 66% of the nonelderly population in the United States are insured through employer group plans. Thirty-three percent have coverage through their own employers, and 33% have coverage as dependents on another family member's employer group policy. The extent of employer group coverage varies geographically. In general, persons in the New England, Middle Atlantic and East North Central regions are more likely to have coverage through an employer group plan than persons living elsewhere in the country. This probably reflects the higher concentration of large manufacturing employers in these areas, which are more likely to provide insurance.

Medicaid coverage is more common in the East South Central and Pacific regions than elsewhere. In addition, the percentage of the population insured through Medicaid varies considerably across the states.

About 16% of the U.S. nonelderly population are without health insurance. The extent of uninsurance varies widely across states, however, and not surprisingly, it varies inversely with the extent of employer group coverage. The New England, Middle Atlantic and North Central regions have the lowest rates of uninsurance (about 11-12%), and the Southern, Mountain, and Pacific regions have the highest rates of uninsurance (19-23%)$_1$.

Health Coverage in Iowa

In 1992, 10.0% of the survey respondents reported that they had no health care plan (insurance). This number included 11.2% of the male respondents and 8.8% of the female respondents. Of all age groups, those between ages 18-24 were least likely to have health insurance (22.9%). One percent of those over age 65 indicated they had no health insurance.

In conjunction with the question about insurance, respondents were asked if they could not afford to see a doctor in the last year. Approximately 9% of the respondents answered yes to that question. Those respondents in the age group 25-34 had the highest rate with 14% responding yes to the question. Only 2.3% of those over age 65 responded yes to the question.

Comparison With Other States

Iowa ranks 43rd out of the 49 states for the number who have no health insurance. Iowa has 10.0% of its population reporting that they have no insurance. The median percentage for no health insurance in those 49 states was 13.9%.

BIBLIOGRAPHY FOR NO HEALTH INSURANCE

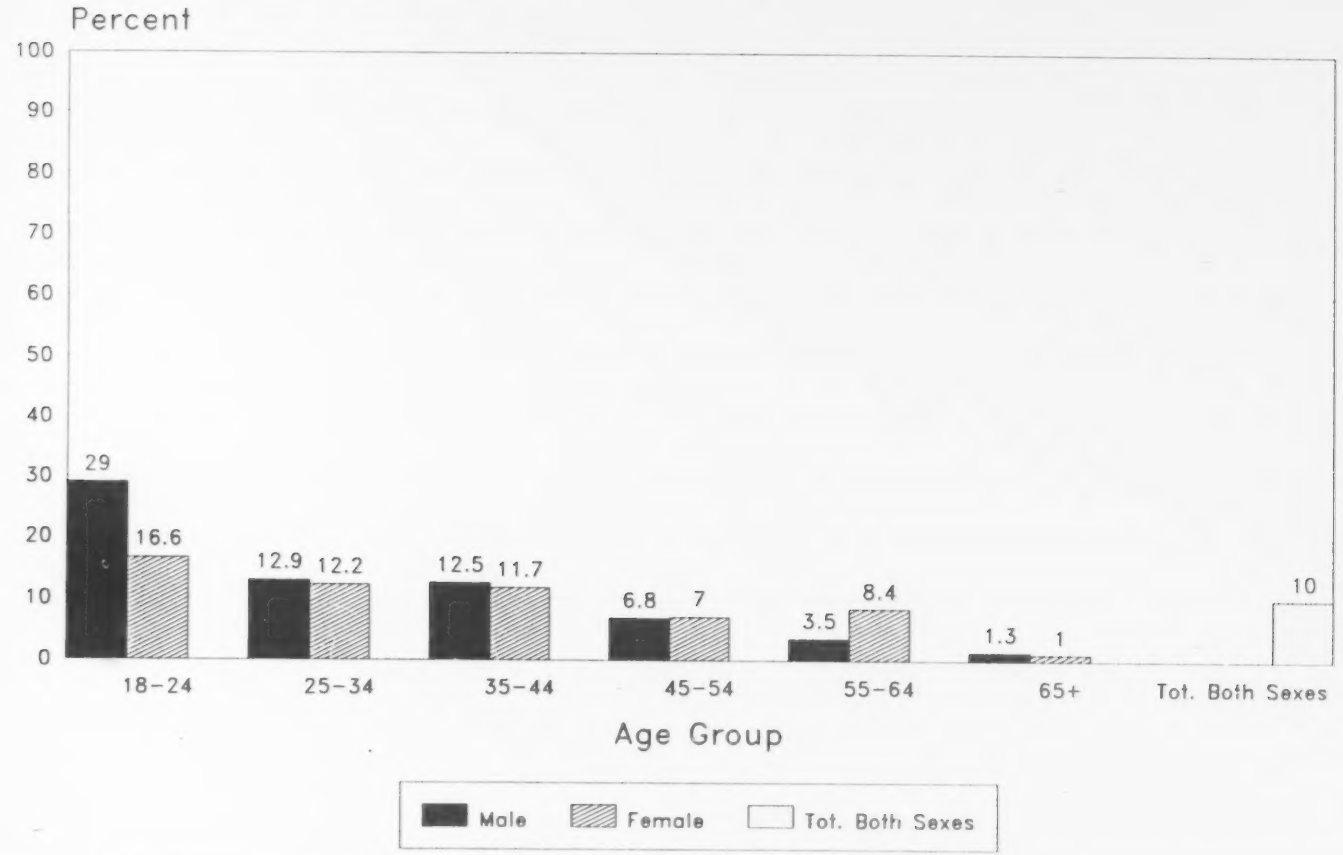
1. Loprest, P. and Gates, M.: State-Level Data Book on Health Care Access and Financing. The Urban Institute, Washington D.C., 1993, pp. 1-8.

POPULATION WHO DOES NOT HAVE ANY KIND OF HEALTH CARE PLAN, IOWA 1992

Sex	Age Group	Total Sample Size N	Yes N	Yes %
Male	18-24	86	24	29.0
	25-34	159	19	12.9
	35-44	186	25	12.5
	45-54	97	7	6.8
	55-64	95	5	3.5
	65+	130	3	1.3
	Unknown/Ref	1	0	0
	Total	754	83	11.2
Female	18-24	89	15	16.6
	25-34	181	21	12.2
	35-44	199	24	11.7
	45-54	117	8	7.0
	55-64	103	7	8.4
	65+	277	2	1.0
	Unknown/Ref	8	0	0
	Total	974	77	8.8
Total	18-24	175	39	22.9
	25-34	340	40	12.6
	35-44	385	49	12.1
	45-54	214	15	6.1
	55-64	198	12	6.1
	65+	407	5	1.1
	Unknown/Ref	9	0	0
	Total	1728	160	10.0

Data collected from the 1992 Behavioral Risk Factor Surveillance System, Bureau of Health Promotion, Iowa Department of Public Health

POPULATION WHO DO NOT HAVE ANY KIND OF HEALTH CARE PLAN, IOWA 1992

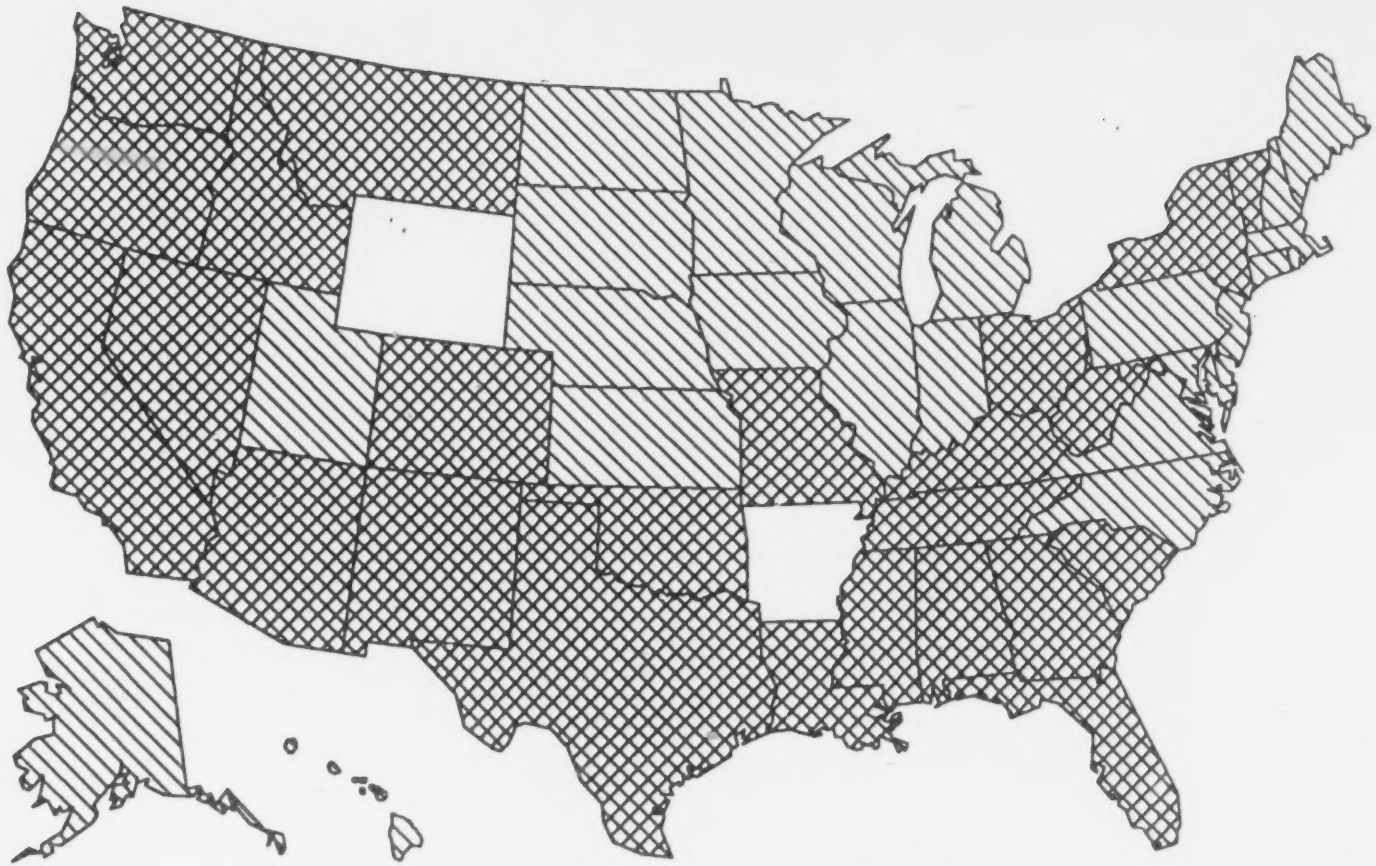


Source: 1992 Behavior Risk Factor Surveillance System, IDPH

Total Sample Size = 1728
Number Who Do Not Have Plans = 160

1992 BRFSS PREVALENCE FOR NO HEALTH INSURANCE

HAVING NO HEALTH CARE PLAN



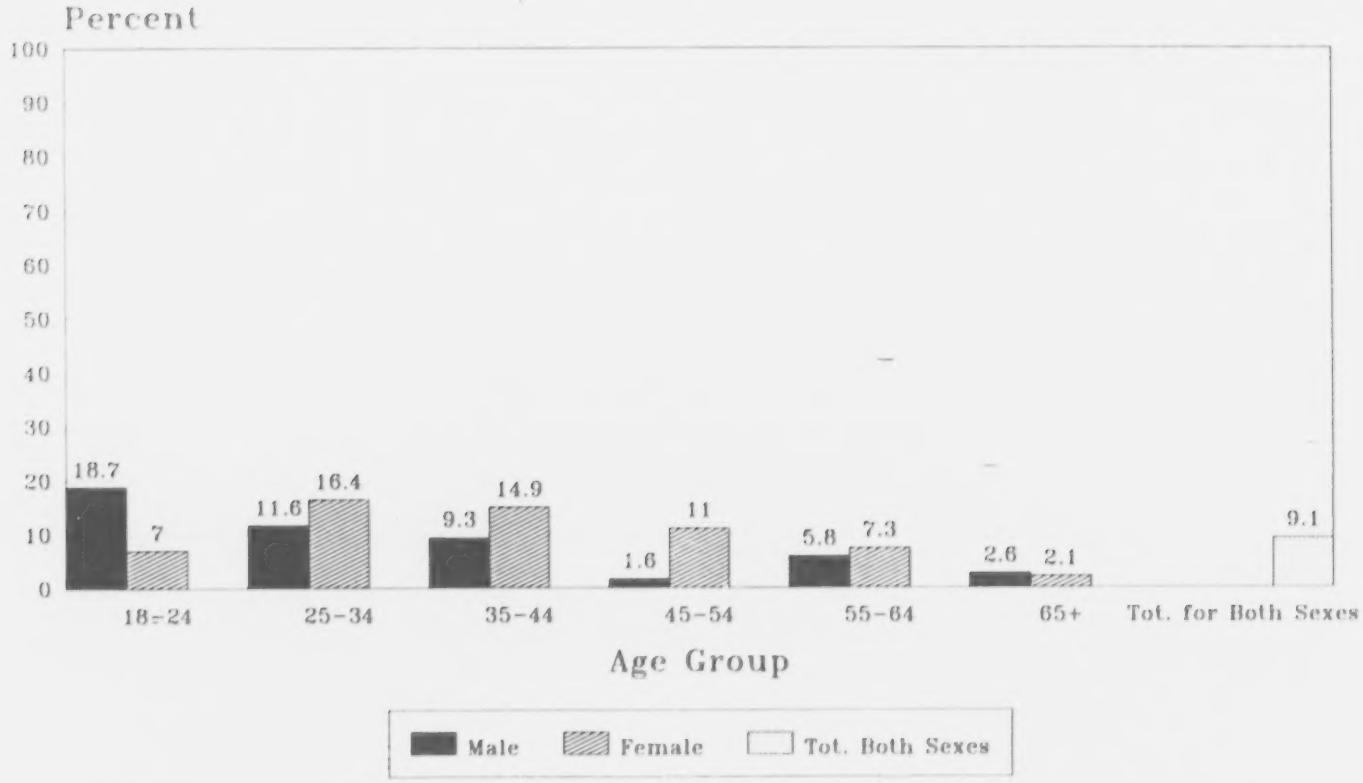
BELOW MEDIAN
AT OR ABOVE MEDI
N/A

POPULATION WHO COULD NOT SEE A DOCTOR DUE TO COST IN THE LAST YEAR, IOWA 1992

Sex	Age Group	Total Sample Size N	Yes N	Yes %
Male	18-24	86	16	18.7
	25-34	159	17	11.6
	35-44	186	18	9.3
	45-54	97	2	1.6
	55-64	95	5	5.8
	65+	130	4	2.6
	Unknown/Ref	1	0	0
	Total	754	62	8.6
Female	18-24	89	6	7.0
	25-34	181	28	16.4
	35-44	199	28	14.9
	45-54	117	13	11.0
	55-64	103	7	7.3
	65+	277	8	2.1
	Unknown/Ref	8	0	0
	Total	974	90	9.6
Total	18-24	175	22	12.9
	25-34	340	45	14.0
	35-44	385	46	12.1
	45-54	214	15	6.3
	55-64	198	12	6.6
	65+	407	12	2.3
	Unknown/RF	9	0	0
TOTAL		1728	160	9.1

Data collected from the 1992 Behavioral Risk Factor Surveillance System, Bureau of Health Promtion, Iowa Department of Public Health

POPULATION WHO COULD NOT SEE A DOCTOR DUE TO COST IN THE LAST YEAR, IOWA 1992



Source: 1992 Behavioral Risk Factor Surveillance system, IDPH

Total Sample Size = 1728
Number Who Could Not See Doctor = 152